

Antiquity

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Editorial Notes

THE first number of ANTIQUITY has been welcomed with very lively interest, and an enthusiasm which is most gratifying. It is difficult to express our appreciation without using language which might seem insincere or stereotyped, but it is evident that the aims of our REVIEW meet with general approval. We wish once and for all to thank those who (in all parts of the World) by their support have helped to launch ANTIQUITY ; those who have made it known to their friends ; and those who have so kindly written to express their satisfaction with the first number. So numerous were these letters that it was impossible even to acknowledge them individually, and we take this opportunity of doing so generally. They have been an inspiration to continue, and to improve.



Many useful suggestions have been made ; whenever possible we shall act upon them. We have, for example, been promised an article on recent discoveries of classic statuary which will be written by Professor Beasley, of Oxford. An attempt will also be made to give a chronological table of the prehistoric periods, in correlation with the earliest dynasties of Egypt and Mesopotamia. Both these subjects were mentioned by readers. We welcome such suggestions, and so

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far as possible will endeavour to carry them into effect, for it is part of the Editor's job to plague his friends with requests and reminders until a coveted manuscript is actually in his hands.



Chronology is a matter of fundamental importance. Until a reliable chronology has been established, orderly knowledge of the past cannot be said to exist. It may be relative or absolute. A relative chronology may be determined by the excavation of a well stratified site, showing changing forms of pottery and implements. But it cannot become absolute, that is, dated in years, until it can be connected with the civilizations of Egypt or Mesopotamia or, in later times, of Greece and Rome. All attempts to give a date in years to the prehistoric periods of Europe are based ultimately upon Egypt or Mesopotamia. The dating of the Minoan periods of Crete is based upon Egypt ; it has been made possible only by the discovery in each country of imported objects which can be dated. Back to 2000 B.C. all authorities accept the same chronological system for Egypt, and the reign of most of the kings is known to within a year or two. Before that date, however, two systems are in use, that of the German school led by Dr Edouard Meyer (called the Shorter Chronology) and that of Sir Flinders Petrie (called the Longer Chronology).



The chronology of Mesopotamia is more difficult. Lists of rulers, with the length of their reigns, exist on cuneiform tablets ; but there were many city states, each with its own dynasty, and some were contemporary. A new method of enquiry (first used by Father Kugler) is at this moment being followed up by Professor Fotheringham, of Oxford ; it is based upon astronomical observations of the planet Venus, made about 2000 B.C. From this line of research a very definite fixed chronology may be expected. By means of "dead reckoning" backwards, the actual years during which the earlier kings reigned may be determined ; but of course such reckoning becomes less reliable the further back it is carried. The latest results attained have been published by Dr Langdon in the Oxford Editions of Cuneiform texts, vol. II (Oxford University Press, 1923).

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As everyone knows, remarkable new discoveries have been made at Kish and Ur by the British and American expeditions excavating there. New vistas have been opened up into the remote past, and valuable chronological evidence obtained. Here lies buried the oldest civilization in the World. Mesopotamia was an ancient country even in the days of Abraham, and we inherit many of its achievements. Dr H. R. Hall, who, before he succeeded Sir Ernest Budge at the British Museum, conducted excavations himself at 'Ubayd, has promised to review these results in a forthcoming number.



We hope to receive in time for the September number an account of the most recent excavations in the Indus Valley, where Sir John Marshall has discovered inscriptions in an unknown language with Sumerian affinities. This will be based upon a report which Sir John himself has kindly promised to send and which will be published in India about the same time. Dr Einar Gjerstad has promised news about his forthcoming excavations in Cyprus. The next number will also contain several good examples of air-photographs to illustrate a paper by Dr Cecil Curwen on ancient British agriculture. Such illustrations are used in this issue for the article by Flight-Lieutenant Maitland on ancient forts and stone walls in Arabia.



Signor Mussolini deserves the gratitude of the whole civilized world for his magnificent schemes of excavation. The "treasure-ships" of Nemi are to be recovered, Herculaneum is to be excavated, and the heart of Ancient Rome itself laid bare. The expense is to be borne by the Italian Government. Nothing but good can come of public-spirited work like this. If we may make a suggestion it would be that an illustrated report on the results of each undertaking should be published, say annually, in a special journal created for the purpose. Such summary publication would cost nothing, for it would have an enormous sale; it would be free from all taint of sensationalism; and it would be more rapid and more effective than publication in inaccessible learned transactions, which might be reserved for fuller and more detailed studies.

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It may perhaps be thought ungracious to expect more, when so much is promised ; but we cannot refrain from remarking that there is a great field for archaeological air-photography in Italy and Tripoli. So far as we know but little has been done in this direction as yet in either country. Vertical photographs of ancient ruins in Tripoli would surely be possible ; and it would seem that, if the water is clear enough, the submerged ruins in the Bay of Naples would reward photography from above. In comparison with the other projects such undertakings would cost practically nothing. They could probably be taken by naval and military airmen in the ordinary routine of practice.



The disfigurement of rural England proceeds apace. Those who are too ignorant or too stupid to discover for themselves "local features of interest," such as John Bunyan's cottage and the "interesting old church" at Elstow, are to have their attention called to them by "artistic and very effective Road Signs in the finest Stoved Enamel." It is anticipated that one effect will be to make motoring in England "even more popular than it is to-day"—amongst motorists presumably, and inn-keepers. It is to be observed that nothing is said about calling attention to "local features of interest" which lie remote from villages—and hotels ; for which we are duly grateful. The local authorities who are to compose and purchase these road-signs may have knotty problems to solve. Supposing their church is old but not particularly interesting ? (The converse will seldom occur). Supposing the feature of greatest interest stands in private grounds ? We know of several which are hidden in gardens and cannot be seen without trespass. Will Stonehenge be advertised at Amesbury and will it be called a "Druidical Temple" or an "interesting old church" ? What is to be done when the monument is not in the village, but the village in the monument, as at Avebury ? A rich crop of "Roman" camps, "Danish" battlefields and "Druid's Altars" may be expected. There is unconscious humour in the claim that a road sign directing attention to an ancient monument which may well have lasted for 4000 years, "should last in the open for at least ten years." The honours are shared between the *Daily Mail*, The Royal Automobile Club, and Mr E. J. Burrow, whose name and address appear on each sign.

Where did Man Originate?

by E. A. HOOTON, PH.D., B.LITT.

STUDENTS of human origins agree that man was not separately created, but evolved in the remote past from an apelike ancestor. To such as reject the evidence of man's emergence from a lower animal form, the place of his original home is not a subject for discussion but rather a tenet of faith, or a simple geographical identification of the Garden of Eden.

Even if one is uninfluenced by ecclesiastical tradition it is difficult to avoid prejudice in the search for the cradle of humanity. The *ex oriente lux* hypothesis, which Reinach once so vigorously contested in the field of archaeology, numbers among its submissive acceptants a majority perhaps of anthropologists and students of primate evolution. Much of human culture and many peoples have come out of Asia. Because of the antiquity of its civilizations, the multifariousness of its inhabitants and its vast extent and physical diversity, that continent has become a natural residuary legatee for all unknown origins. The paucity of knowledge concerning the archaeology and palaeontology of Asia has determined its selection as the mute scapegoat of all our original sins.

Some scientists display a local patriotism which leads to a partisan attitude in the matter of selecting the *officina gentium*. A distinguished anatomist, sojourning in Egypt during the plastic period of his archaeological experience, is so impressed with the antiquity of civilization in the Nile Valley that he interprets cultural phenomena throughout the ancient world in terms of Egyptian borrowings. A well-known Latin-American palaeontologist, working in the Argentine, enthuses over the possibilities of the pampas formations to such an extent that he causes a fossil monkey to evolve into a *Homunculus patagonicus*, and creates from an Indian atlas-bone and the femur of a fossil cat the common ancestor of all existing men.

There are several fields of research from which evidence may be brought to bear upon the problem of man's beginnings. Palaeontology and geology provide information as to the distribution of fossil members

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of the Primate Order, an animal group which includes the lowly lemurs and tarsiers as well as the monkeys of the New World and the Old World, the anthropoid apes and man. The earliest fossil forms of primates are found in the first period of the Tertiary Epoch, the Eocene. These consist exclusively of lemuroids and tarsiods. The absence of higher primate forms indicates the futility of looking for man. In the next period of the Tertiary, the Oligocene, a small and generalized anthropoid ape, *Propliopithecus*, has been found in the deposits of the Egyptian Fayum. This fossil ape is generally admitted to fulfil most of the theoretical requirements for the common ancestor of man and the anthropoid apes. In the Miocene period early forms of the gibbon, the small anthropoid ape, occur in Europe, Asia, and Africa, as well as generalized forms of larger anthropoid apes which show characteristics intermediate between the chimpanzee and the gorilla. Fossil orang-utans are found in the deposits of the Upper Miocene period in the Siwalik Hills of northern India. Man is thought to have become a terrestrial biped animal during the Miocene period. It is perhaps reasonable to delimit the human stage by the assumption of the erect posture and the change from an arboreal to a terrestrial habitat. Yet the ancestral human stock had probably diverged from the closely related stem of the great anthropoids long before our protohuman ancestors abandoned the trees and took to the ground. In the Pliocene period which precedes the Glacial Epoch, fossil anthropoid apes are found in Europe, Asia, and Africa but skeletal remains of man have not yet come to light. In the Glacial Epoch human precursors, which preserve in their skeletal remains many resemblances to the anthropoid apes, have been discovered in Europe, Africa, and the Indo-Malayan archipelago. Essentially modern forms of man appear in Europe in the latter part of the Glacial Epoch, and possibly much earlier. It is fairly certain that every existing variety of man, with the exception of certain recent hybrid types, was fully evolved at the beginning of the recent period, perhaps 25,000 years ago.

It should be apparent that a knowledge of the evolution of the primates, as revealed by discoveries of fossil forms, is a prerequisite for any serious consideration of the question of man's original home. A detailed examination of the evolutionary rank and geographical distribution of prehuman and protohuman ancestors affords one sound method of attacking this problem.

Prehistoric archaeology includes the identification of the earliest cultural remains of man. Our ancestors began to utilize and fabricate

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tools as soon as they attained a human status. Even the modern anthropoid apes fall little short of the tool-using stage. It is evident that the distribution of man's earliest artifacts should contribute toward the solution of the problem of his original home. Since stone implements are much less destructible than skeletal remains, it is logical to infer that more abundant evidence of man's early distribution will be afforded by this class of data than by actual finds of the skeletal remains of the earliest men. There are, however, several serious difficulties in the interpretation of such evidence. The recognition of the crudest stone implements made by man is almost impossible, so little do they differ from forms produced by purely natural and fortuitous processes. When easily recognizable and definitely formed implements occur in geological deposits, the time of man's origin is already remote. Moreover, backward peoples have continued to make and use the rudest of stone tools and weapons down to modern times, and, in the frequent absence of geological stratification, it is excessively difficult to distinguish between these modern survivals of primitive industry and those which by reason of their geological antiquity afford data bearing upon the original home of man.

The study of the ancient civilizations, such as those of Egypt and Mesopotamia, can throw little light upon the problem of the birthplace of man. The complexity of a civilization is no true measure of its antiquity. It would be ridiculous to infer that house-building originated in New York City because the highest skyscrapers are found on Manhattan Island. Man migrates and carries his culture with him and the spots most favourable for the development of an intricate civilization are not necessarily the probable centres of human evolution.

It does not seem that myth, legend, and historical tradition can furnish certain clues to assist us in the search for man's birthplace. Our ancestors must have become human animals long before they were capable of transmitting orally their vague and irrational speculations as to the manner and place of their origin. Our earliest traditions which have any historical basis can scarcely carry us back more than 8,000 years, whereas the age of man as an erect biped is probably not less than 800,000 years. The Greeks of 500 B.C. had almost completely forgotten the parent Minoan civilization, which was in its late bloom a thousand years earlier. It is quite futile to capitalize the ignorance of the ancients in the quest for human origins and the cradle of mankind.

Atlantis and Lemuria and other mythical sunken continents still

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engage the attention of the few ill-equipped antiquaries who prefer to deal with geological impossibilities and anthropological absurdities, rather than to devote their efforts to the more profitable task of studying the distribution of man and culture in existing land masses. I am unaware of any competent palaeogeographer or geologist who admits the existence of any such submerged continent within the limits of the period of humanoid development in the higher primates.

A consideration by continents of the evidence of primate palaeontology, of prehistoric archaeology, and of the modern distribution of men and higher primates, should at least restrict the limits of our search.

Australia is remarkable for the absence of mammals, with the exception of bats and rodents. It is the home of the lowly Monotremata and of the marsupials. The complete absence of primates, fossil or recent, from this continent and from New Guinea and the islands of Polynesia, eliminate this area from any serious consideration as the birthplace of man. The native inhabitants of Australia and Tasmania are physically somewhat archaic, and culturally well below the neolithic level. It seems probable, however, that man was a geologically recent immigrant into this area. The Talgai skull, recently found in Queensland, seems to represent a rather primitive type ancestral to that of the modern Australian, and may possibly date from the Pleistocene epoch. On the whole, the absence of primates and the lack of evidence of the existence of early cultures seems to eliminate the Australian region from further consideration.

The New World has yielded many of the earliest fossil forms of the primates. In the Palaeocene deposits of the southwestern United States have been found remains of primate-like insectivores which were probably remotely related to the primates and more closely to existing tree-shrews. In the lower Eocene there appear very primitive lemuroids, the Notharctidae, which increased in size throughout the period and may have been the ancestors of the present American monkeys. In the Eocene deposits of Wyoming are also found early tarsioids which with the lemuroids constitute the lowlier groups of the primate order. The Miocene deposits of Patagonia have yielded a few fossil forms of platyrrhine monkeys, one of them the notorious *Homunculus patagonicus*, from which Ameghino proposed to derive man. It seems probable that the American platyrrhine monkeys and the marmosets were derived from primitive primates with tarsioid skulls and that this process of evolution took place in the New World.

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Certain specializations of the platyrrhine monkeys clearly exclude them from ancestry of the higher Old World primates and from that of man. The record of fossil primates in the New World ends with Miocene, with the exception of the find of two isolated teeth from a mid-Pliocene deposit of Nebraska. Professor Henry Fairfield Osborn and Dr William K. Gregory of the American Museum of Natural History have identified these much worn and fragmentary molar teeth as those of a new type of anthropoid ape, *Hesperopithecus*. This identification is, however, contested by certain European palaeontologists and further evidence will be necessary before the existence of anthropoid apes in the New World can be demonstrated. The absence of any convincing evidence of the development of anthropoid apes and higher primates in the New World argues that the place of man's origin must be sought elsewhere.

The study of archaeological remains of man in the New World renders even more improbable the hypothesis of an American origin of man. Up to the present time it has not been possible to establish beyond a reasonable doubt the existence of man in America during the glacial period. There is, indeed, no valid reason why man could not have reached the New World from Asia in the last interglacial period. But the river gravels of glacial age in America have yielded no such series of incontestably human artifacts as are found in the Old World. A considerable number of human skeletons or skeletal fragments have been attributed to the Pleistocene, because of their alleged occurrence in geologically ancient deposits or in association with the remains of extinct animals. None of these, unfortunately, has been found in unquestionable and wholly undisturbed Pleistocene deposits. There has always arisen doubt as to the age of the stratum, suspicion of an intrusive burial, or some other condition which prevents the recognition of the authenticity of the find. In no case have such skeletal remains exhibited anthropoid characters or features of morphological inferiority which would be expected to occur in very ancient forms of man. Thus, while the existence of man in the New World in late glacial times may be proved in the near future, it is highly improbable that evidence of the evolution of human forms from prehuman ancestors in the western hemisphere will ever be forthcoming.

Europe during the Eocene period seems to have enjoyed a tropical climate and its deposits have yielded abundant remains of fossil lemuroids and tarsoids, which in the opinion of Dr W. K. Gregory,

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one of the most notable students of primate palaeontology, are to be regarded as the probable ancestors of all of the higher Old World primates. In the Oligocene period no primate fossils have been found in Europe. In the succeeding Miocene period, which may have marked the development of man from an arboreal to a ground-dwelling erect-walking primate, representatives of ancestral forms of Old World monkeys and ancestral forms of anthropoid apes have been recovered from European deposits. The most important of the latter are the members of the genus *Dryopithecus*, a generalized form of anthropoid ape which may well have been a common ancestor of the gorilla, the chimpanzee, and man. Remains of *Dryopithecus* are also found in southern Asia and in north Africa. In the Pliocene period fossil anthropoid apes and monkeys are still found in Europe. In the latter part of this period early forms of man may have existed in Europe, but their skeletal remains have not yet been recovered. The European record of fossil primates is thus very rich. But it shows important lacunae in the Oligocene period when the common stem of man and the anthropoid apes was branching off the Old World trunk.

The importance of Europe as an early home of man is further obvious when one considers the findings of human palaeontology. Of the four most important specimens of early man or his immediate precursors, two have been found in the European continent. The Heidelberg jaw is an enormous apelike mandible, discovered at the depth of about eighty feet in the Mauer sand-pit, near Heidelberg, Germany. It belongs to the first or possibly the second interglacial interval of the Pleistocene. This massive chinless specimen contains obviously human teeth with very large pulp cavities which seem to indicate a herbivorous specialization not found in modern man but reappearing in the fossil Neanderthal race. Of equal importance is the Piltdown skull, *Eoanthropus dawsoni*, which was found in the plateau gravels of Sussex, England, under geological circumstances indicating mid-glacial age or earlier. The brain-case, except for the thickness of the bones, is quite modern in appearance, with a well developed frontal region and no massive brow-ridges. It must have contained a brain as large as that of the average Englishwoman of today. The skull is generally thought to be that of a female. With this modern-looking brain-case is associated an almost completely chimpanzee-like jaw, quite chinless and with projecting canine teeth such as had not been found in recent or ancient human types up to the time of this discovery. After a number of years of discussion, the

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finding of similar fragments of another specimen in the same deposit, but at a considerable distance from the first Piltdown discovery, seems to have convinced the majority of students that this early type of man had actually developed a modern form of brain-case, while retaining an anthropoid form of the jaws and teeth. The Heidelberg man and the Piltdown woman represent radically different forms, each demonstrating its humanity and its anthropoid reminiscences in quite different ways.

In the last interglacial period and during the last glacial advance the primitive Neanderthal race inhabited Europe, living, for the most part, in caves. A fair number of skeletons of these people have been discovered associated with their characteristic stone implements, which usually belong to the archaeological culture known as Mousterian. Neanderthal man retains many generalized ape features, but his human status cannot be denied. A flattened brain-case with low and receding forehead and massive eyebrow-ridges lodged a brain of ample size but of primitive pattern. The jaws and face are projecting and the chin is rudimentary. The teeth are massive, but human, displaying the enlarged pulp-cavities which occur in the Heidelberg jaw. Neanderthal man was short, with massive bones and a barrel-shaped chest. Most of the bones of the trunk and of the limbs show apelike features surviving in association with predominantly human characters. The bones of the foot show that it was a supporting organ, although anthropoid hints are not lacking. The posture must have been erect and the gait biped. It is the opinion of some of the best authorities that Neanderthal man represents a later development of the Heidelberg precursor and because of certain specializations cannot be reckoned as a direct ascendant of modern man.

At the end of the glacial period Neanderthal man was succeeded in the occupancy of the caves of western Europe by modern-looking long-headed types of man whose skeletons display no more simian features than do those of many recent men. These late glacial men, who seem to have developed the archaeological cultures of the Upper Palaeolithic, are generally supposed to have entered Europe from Africa. Sir Arthur Keith has maintained for many years, confidently at first, but of late somewhat feebly, the opinion that the modern type of man arrived in England early in the Glacial Epoch and possibly even in the late Tertiary. Certainly a number of skeletons have been found in England and elsewhere in Europe, which, although modern in appearance, have been disinterred from gravel deposits apparently

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of early Pleistocene date. Unfortunately, in no single instance has the early glacial provenance of any one of these skeletons been established to the satisfaction of the majority of geologists and palaeontologists. Neanderthal man is conspicuous by his absence in England, although abundant pre-Neanderthaloid or pre-Mousterian stone implements occur in the terrace gravels of the English rivers.

The archaeological evidence of man's antiquity in Europe is more extensive and complete than for any other continent. This may be, in a measure, a result of the more extensive archaeological work which has been carried on in Europe as contrasted with Asia and Africa, where comparatively little has been done. After years of persistence in the face of a generally prevailing scepticism on the part of pre-historians, Mr Reid Moir has succeeded in convincing many of the most competent authorities on the stone-working of early man that certain flints which occur in the Upper Pliocene deposits of East Anglia, and particularly at the 16-foot level in the Foxhall gravel pit, are humanly-made. Even those who still dispute these findings are forced to admit that typologically recognizable flint implements are not confined to the river gravels of the last interglacial period, but occur in deposits dating from the very beginning of the Glacial Epoch. It seems to follow from the archaeological data that man, as a tool-using animal, inhabited western Europe at least as early as the beginning of the Quaternary and very probably in the closing millennia of the Tertiary Epoch.

The foregoing summary of the European evidence makes it apparent that we cannot pass over casually the claims of this continent for consideration as the original home of man. From a zoögeographical standpoint, however, Europe is usually considered either as an extension of the northern Asiatic area or of the north African area. This does not necessarily imply that European fauna have all been derived from one or the other adjacent continents. The Barbary apes, found on the Rock of Gibraltar, are the only primates now inhabiting Europe, and these with the identical species found in Morocco and Algeria are allied to the Asiatic macaques rather than to the African monkeys. Comparatively few genera and species of mammalia are peculiar to Europe, but of all the regions of the Palaearctic,—an extensive zoögeographical area including all of temperate Europe and Asia, and North Africa as far south as the Tropic of Cancer—Europe can show the most convincing record of fossil primates, the richest remains of fossil man, and the most varied and extensive and

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earliest archaeological cultures. It does not include, however, the tropical forest area to which the anthropoid apes are confined in their present day distribution.

The strip of Africa which borders the Mediterranean and extends southward to the Tropic of Cancer is zoögeographically more European than African. South of this Mediterranean zone is the Ethiopian region, including all the rest of the continent and the neighbouring island of Madagascar. The palaeontology of Africa, with the exception of its Mediterranean zone, is but little known and the Eocene deposits have not yielded lemuroids, although there is little doubt that these lowly primates ranged over the Ethiopian region in that period. In the Oligocene period there are found in the dried-up lake bed of the Fayum of northern Egypt the earliest representatives of the Old World monkeys and *Propliopithecus*, the ancestral form of all anthropoid apes and probably also of man. During the Miocene period there occur in the Moghara beds of northern Egypt a fossil form of gibbon and a species of *Dryopithecus*, that large generalized anthropoid which may have given rise to gorilla, chimpanzee, and man. In the succeeding Pliocene period fossil remains of monkeys akin to the present day baboons, macaques, and other catarrhines, have come to light in North Africa and in the area south of the tropical forest. A form of anthropoid ape has recently been discovered at Taungs, Bechuanaland, in deposits which may be of Pliocene date. This specimen, which has been named *Australopithecus africanus*, displays, according to some writers, affinities with gorilla and chimpanzee. At any rate it demonstrates the presence in the Ethiopian area of a hitherto unknown type of anthropoid ape belonging to a geologically ancient horizon.

Fossil man in Africa is represented by one early human type of immense importance and by several finds of modern types of man which may be of geological antiquity. The skull of Rhodesian man, found in the Broken Hill mine in northern Rhodesia in 1921, is characterized by an enormous face with brow-ridges surpassed only by those of the male gorilla. The forehead is narrow and low; the brain-case is elongated and narrow and must have lodged a rather small brain. The face combines anthropoid ape and human features. The palate is the largest ever found in man, but contains teeth modern in form and badly diseased. The limb-bones associated with the skull are modern in appearance. Sir Arthur Keith regards Rhodesian man as an early offshoot from the common human stem which gave rise to both Neanderthal man and all modern varieties of man. It is his opinion,

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however, that the Rhodesian specimen is a twig of the modern branch springing off a little above the Neanderthal-Homo sapiens fork. The geological age of the Rhodesian specimen is dubious ; it may be Pleistocene but hardly earlier. It is quite certain that remains of ancient types of man are fairly abundant in the Ethiopian area and have only to be discovered.

Archaeological evidences of an early occupation of the African continent by man are probably not less numerous than those of Europe, although they have not received the same intensive study. In the north African area are found sequences of palaeolithic implements of similar types and probably of equal antiquity with the Lower Palaeolithic cultures of Europe. In several sites of northwest Africa there are stratigraphic sequences of implements which may be equated approximately with the Chellean and Acheulean industries in point of time and in typology. In the Nile Valley and the surrounding parts of the high desert early palaeolithic flint implements occur in abundance, but mostly under conditions which do not permit any determination of their geological date. In the Horn of Africa and in South Africa similar artifacts are found in the river gravels. In the absence of any exact knowledge as to the geological and palaeontological sequences in South Africa, it is difficult to assign a date to most of these discoveries. While there is reason for believing that palaeolithic industries survived in South Africa longer than they did in Europe, there is no doubt that the occupation of the Ethiopian region by man stretches far back into geological antiquity.

The present day distribution of primates in Africa argues most impressively its case as the home of the order. Nearly one-half of the existing species of lemuroids (forty-six species and sub-species) including one distinctive family and eleven genera, are restricted to Madagascar. On the African mainland are forty-one species and sub-species representing four genera.¹ Thus there are eighty-seven species and sub-species of lemuroids in the Ethiopian area as contrasted with eighteen species found in southeastern Asia and the islands of the East Indian Archipelago which constitute the Oriental zoögeographical region. Tarsioids are not found in the Ethiopian area. Of the *Cercopithecidae* or Old World tailed monkeys, the baboons are almost wholly confined to the African area, and the macaques, except for the

¹ Davidson Black : *Asia and the Dispersal of the Primates* ; Bulletin of the Geological Society of China, vol. IV, no.2, p. 141, Peking, 1925.

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Barbary apes, to the Oriental area. The thumbless monkeys of the group called *Semnopithecinae* are abundantly represented in both the Ethiopian and the Oriental regions. Africa is the home of the most manlike of the great anthropoid apes, the chimpanzee and the gorilla, while the small gibbon and the greatly specialized orang-utan are restricted in their range to the Oriental region. Africa, as a whole, including the Mediterranean strip, presents the most impressive array of present day higher primates and survivals of the lowliest forms of the order ; it has yielded the earliest fossil forms of catarrhine monkeys and anthropoid apes, and it shares in the possession of those fossil apes of the genus *Dryopithecus* which are supposed to stand closest to the common ancestor of man and the *Simiidae* ; it abounds in archaeological finds of the earliest types of man's artifacts ; it has yielded a fossil skull which in some respects is more anthropoid than *Pithecanthropus erectus*, while in others it displays modern human characteristics ; it is the home of three negroid varieties of man and at least one white race. Africa's claim to be the mother of primates and of man cannot easily be refuted.

Asia falls into two zoögeographical areas, one of which is a part of the Palaearctic region and is continuous with Europe. This area includes most of Asia Minor, Siberia, the Thibetan plateau, Mongolia and the plains of north China together with Japan. The Oriental region consists of India, Indo-China and the Indo-Malayan archipelago with the exception of Celebes, which belongs with the Australian region. The Palaearctic portions of Asia have shown, up to the present, very little in the way of evidence of ancient occupation by the primates and by ancient man. Their deposits, are, however, almost unexplored. The only fossil lemuroid hitherto reported from this area is a lemuroid-insectivore discovered by Dr J. G. Andersson in the Eocene deposits of the southern Shansi. The palaeontologists of the American Museum of Natural History confidently expect to discover ancestral fossil lemuroids in the Eocene of Mongolia, but at the present writing none has yet been reported. From Ertemte in inner Mongolia Dr Andersson is said to have recovered the remains of a fossil gibbon, the first and only anthropoid ape found in northeastern Asia. The fossil record of primates in this area is therefore extremely scanty, although subsequent explorations undoubtedly will reveal new forms.

Archaeologically central Asia has not yet revealed conclusive evidence of the geological antiquity of man within its borders. In Asia Minor, Syria, and Mesopotamia implements of the Lower

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Palaeolithic type have been found, and a Neanderthaloid skull fragment has recently been recovered from a site on the shores of Lake Galilee. Stations dating from the Mousterian or Lower Aurignacian period are reported from the loess formation of Shensi by Father Teilhard de Chardin. The implements are said to be associated with a distinctly Quaternary fauna. On the eastern frontier of Thibet, at a depth of 60 metres in a gorge of a tributary of the Hwang-Ho, fossil remains of six human skeletons have been found by Fathers Licent and Teilhard de Chardin. These were associated with animal bones and crude stone implements. Implements possibly as old as the European Azilian, which marks the transition from the Palaeolithic to the Neolithic, have been discovered in Mongolia by the members of the Third Asiatic Expedition of the American Museum of Natural History. Several stations in Siberia have yielded evidence of the Magdalenian culture which flourished in the last phases of the final glacial retreat.

On the whole there is little in the evidence thus far accumulated in Palaearctic Asia to indicate either that it was an important centre of primate development or that it was occupied in very ancient times by man. The migration across this region to America of the ancestors of the present American Indians cannot be proved, from the available American evidence, to be anything but recent.

The Oriental region, comprising southeastern Asia and the East Indian archipelago, offers, on the other hand, a much more promising fossil and archaeological record. No fossil lemuroids or tarsuoids have yet been found in this area, although it is altogether probable that these early forms of the primates existed here in Eocene times. Nor have any Oligocene primates been found. It is not until the Upper Miocene period that fossil primates occur in this area. But these include a rich variety of anthropoid forms. The Siwalik Hills of northern India have yielded teeth and fragments of jaws of three genera and four species of anthropoid apes. These include from the Upper Miocene beds two species of *Dryopithecus*, *Palaeosimia* a supposed ancestor of the orang-utan, and *Sivapithecus*, a genus regarded by Dr Gregory as an early offshoot from the *Dryopithecus* stem which also may have given rise to man. The Upper Miocene deposits of the Siwalik Hills have also produced a gigantic form of *Dryopithecus*. The Lower Pliocene deposits include *Palaeopithecus*, an anthropoid regarded by Gregory as an ancestor of the gorilla. The Upper Pliocene deposits have yielded fossil remains of an orang and several species of

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macaques, baboons and semnopithecues. The mere enumeration of this list of fossil anthropoids demonstrates the great importance of northern India during the crucial period of primate evolution within which the great anthropoids and man were being differentiated into their present forms.

The Oriental region has given up the single specimen of greatest importance to the study of human evolution, *Pithecanthropus erectus*. This fossil, found in Java, near Trinil, under geological circumstances indicating an early Pleistocene date, is intermediate between an anthropoid and a human status. The skull-cap is small and dolichocephalic, with apelike supraorbital crests and a low and receding frontal bone. It looks very much like that of a gigantic gibbon. The cubical contents of the brain-case are estimated at 900 cc., a capacity which is below the limit of normal individual variation. A fragment of the lower jaw indicates that the canine teeth were not projecting and that the chin region had a rudimentary human conformation. Three teeth associated with the specimen are principally human in character. A thigh-bone, which is presumed to have belonged to the same individual, is essentially similar to that of modern man and by its muscular markings clearly indicates that its possessor had assumed the erect posture and biped gait. If the attribution of these different fragments to one individual is correct, as seems to be the opinion of the majority of authorities, *Pithecanthropus erectus* was either a form truly intermediate between man and the ancestral anthropoids, or an early offshoot from the humanoid stem which survived to a relatively late period.

Professor Eugene Dubois, the discoverer of *Pithecanthropus erectus*, has recently revealed that in 1890, prior to the Trinil find, he recovered two fossil crania from a deposit near Wadjak, Java, of probably Pleistocene age. These Wadjak skulls are capacious as to brain-case, but otherwise recall the crania of modern Australians. They are regarded by Dr Dubois as ancestors of the present Australians, who may have reached their island continent in the Pleistocene epoch.

Implements of Lower Palaeolithic types have been found in the valleys of the Ganges, Indus and Narbada, and of southern India in various sites. Although our knowledge of the earliest archaeological remains in the Oriental region is very scanty there seems to be no good reason for doubting the great antiquity of man in this area.

From the foregoing summary it is clear that the Oriental region of the Asiatic area affords numerous indications of being one of the most

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important centres of higher primate and human evolution. If the presence of ancestral and recent forms of anthropoids, the occurrence of protohuman fossils, and the development of early types of stone-work may be taken as relevant evidence, there is no other area except Africa which can offer equally strong claims to designation as the place of human origin. The anthropoid apes which find their home in the Oriental region to-day are the small gibbon which occurs in most parts of the area, and the orang-utan which is confined to Borneo and Sumatra. The gibbon is in many respects the most primitive of the anthropoids, although in some characters highly specialized. The orang is narrowly adapted for arboreal life and shows certain degenerative features.

There are two fundamental questions, the answers to which largely determine the interpretation of the available evidence as to the origin and birthplace of man. The first pertains to the nature of human evolution and of organic evolution in general. Are we to regard human evolution as an essentially unilinear process, operative exclusively in a single area or in a few areas, or is it rather to be regarded as a universal process which works continuously but variously, sometimes rapidly, sometimes slowly, upon all organisms at all times, in whatever environment they may find themselves? It seems to me that there can be but one answer to this question. Evolution is a multiple universal process and not a single unilocal miracle. Sometimes it proceeds apace and sometimes it lags; its rapidity and direction are determined by the potentialities of the organisms upon which it operates and by the requisites of the environments through which it operates. Any evolutionary product is the resultant of multiple and complex environmental and hereditary forces. Through the very multiplicity and complexity of these interacting forces and tendencies, evolutionary forms may vary somewhat after the pattern of a chance distribution. But chance variations are multiple, not single; they recur in accordance with the laws of probability. Given a primitive lemuroid-insective group of multiple origin and spread out over a wide geographical area, evolution must operate upon all members of this group in whatever environment they may find themselves. In some cases where an environment equilibrium is maintained in that the original habitat is preserved unaltered and the individual animals remain within it, evolutionary changes may be at a minimum. In other cases conservatism of the animal may cause it to seek out an environmental equivalent where it may survive with the least possible modification. But most animal forms evolve.

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In the Miocene period generalized anthropoid forms are found in widely separated areas of the Old World. Some of these fossil anthropoids may have been the ascendants of man. It is reasonable to suppose that the anthropoid ancestors of man were distributed over an area conterminous with that which the ancestors of the present anthropoid apes ranged or, at any rate, equally large. These proto-human ancestors may then have attained the human status in more than one place. To the present writer this conclusion seems inevitable. Nevertheless, when one expounds a scientific heresy for the benefit of lay readers, he should in fairness make clear to them that the opinion offered is not generally accepted. Many or most students of human evolution adhere to a sort of Darwinic monogenism which would derive man, whatever his variation in present form, from a primæval pair of anthropoid precursors who ate of the fruit of knowledge in a single zoölogical Garden of Eden. Such a view disregards all fossil and recent evidence. Four distinct genera of anthropoid apes have survived to the present, all of them derived from the same generalized ancestors, probably no longer ago than the Miocene period. The common human stem must also have sent off various branches as early as the Miocene and in more than one region. Fossil forms of man are distributed from Rhodesia in the south to England in the north and to Java in the east. *Pithecanthropus erectus*, *Eoanthropus dawsoni*, *Homo heidelbergensis* and *Homo rhodesiensis* are so profoundly dissimilar in their morphology that it is hardly conceivable that any one of them could be a direct ascendant or descendant of any other. Some of them retain completely anthropoid features in some parts of the body while having attained an essentially human status in other characters. But these asymmetries are not found to be identical in the various fossil men hitherto unearthed. *Pithecanthropus* has a small gibbonoid brain-case with great brow-ridges and a low forehead, but his canine teeth, according to latest accounts, were not projecting and his chin was not simian. *Eoanthropus* had a large brain and a high-brow with small supraorbital ridges, but her jaw is chimpanzee-like, chinless and with protruding canines. Her German contemporary, or approximate contemporary, had a massive bestial mandible in which were implanted altogether human teeth which hint at cud-chewing proclivities. The Rhodesian savage of the Broken Hill mine had supraorbital ridges which would do credit to a male gorilla, vast jaws containing degenerate teeth which would shock a dentist, and a completely modern poise of the head and conformation of limb-bones. These fossil forms of man

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can be fitted to the Procrustean bed of unilinear evolution only by dismembering them and assigning the misfitting parts to hypothetical attendant anthropoid apes, presumably their constant companions. Many scientists would have us believe that ancient man was so closely associated with contemporaneous great apes in life that in death they were not divided, or, that, if they were divided in death, complementary parts of each were shuffled together in the same stratum. But no such legerdemain on the part of Nature can account for the human teeth in the apelike Heidelberg jaw or the gorilloid brow-ridges surmounting the human nose of Rhodesian man.

Why not admit that Nature tried a number of experiments in developing anthropoid forms in a humanoid direction; that these experiments were conducted simultaneously in several parts of the world upon similar generalized anthropoid stocks; that some of them were more successful than others, and that some of the early and crude attempts resulted in protohuman types which have become extinct? Nor is it necessary to infer that all modern types were produced in the same region. Given the same generalized prehuman anthropoid stock, convergent evolution is sufficient to account for the resemblance in detail that obtains between the most diverse human races of the present day, but environmental modifications in recent times are insufficient to explain the differences. I am not attempting to argue that different forms of man have been derived from the various existing anthropoid apes, but only that the common humanoid stem must have split up into diverse shoots in different regions of the world at about the same time that the present great anthropoid apes were being evolved into their separate genera.

The second question bearing upon the interpretation of the evidence as to the place of man's evolution from an anthropoid to a human state, has to do with so-called principles of animal dispersion. Dr W. D. Matthew, a distinguished palaeontologist, has enunciated² the following principles:—

“ Whatever agencies may be assigned as the cause of evolution in a race, it should be at first most progressive at its point of original dispersal, and it will continue this progress at that point in response to whatever stimulus originally caused it and spread out in successive waves of migration each wave a stage higher than the

² W. D. Matthew, *Climate and Evolution*, Annals of the New York Academy of Science, vol. xxiv, pp. 171–318. Quoted from Davidson Black, *op. cit.* p. 141.

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preceding one. At any one time therefore, the most advanced stages should be nearest the centre of dispersal, the most conservative stages the farthest from it ". . . .

This statement involves the assumption that physical environments inevitably migrate and that more conservative animals follow these environments, remaining immobile in an evolutionary sense, or relatively immobile. It seems to imply also that evolutionary forces operate only upon animals which have remained at the spot in which they originated and that these evolutionary forces act principally or exclusively through changes of the physical environment. The adoption of such a principle would necessitate the conclusion that the places where one finds primitive existing forms of any order of animal are exactly the places where these animals could not have originated. Therefore the presence of modern lemuroids in the Oriental and Ethiopian regions indicates that lemuroids did not evolve in these areas but are refugees from somewhere else. The finds of fossil lemuroids in Europe and North America argue in favour of some non-European and non-American place of origin, and the occurrence of the remains of *Pithecanthropus* in Java excludes that part of the world from consideration as the cradle of humanoid types. But this is the principle of *lucus a non lucendo*, which pushed to its logical extreme would lead us to seek for the birthplace of man in that area where there are no traces of ancient man and none of any of his primate precursors. Thus in his stimulating article on "Asia and the Dispersal of the Primates" Professor Davidson Black argues that the presence in the Egyptian Fayum of *Parapithecus*, the earliest known catarrhine, and of *Propliopithecus*, the earliest anthropoid, indicates that the place of origin and centres of dispersion of these forms were remote from Egypt.³

But even if one grants to this principle a certain measure of probability, is it not necessary to suppose that some of the progressive members of a group might migrate from the original centre of dispersal and that some, at any rate, of the conservative members would die, so to speak, *in situ* ? One supposes that the most "conservative" of an animal group are those which are least capable of adapting themselves to environmental changes, and that the ultra-conservatives are those who would succumb to any environmental change and die hard in the home ditch rather than follow their migrating climate. It is conceivable also that the most progressive animals are those who move

³ Davidson Black, *op. cit.* p. 148.

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into new environments rather than those who wait for new environments to move into them.

On the whole, it seems reasonable to look for the origin of man in those places where existing primates of low development and also those most closely related to man, are now at home ; where the most abundant palaeontological evidence of higher primate evolution is to be found and where the most archaic forms of man and the earliest evidence of his industries have been discovered. If one supposes that man's ancestor took to the ground and assumed the upright posture because of a deforestation of the area in which he lived, it is difficult to explain the presence of *Pithecanthropus erectus* in tropical Java in early Pleistocene times ; for *Pithecanthropus* seems to have been an anachronistic survival of an early humanoid form, and one would suppose that Pithecanthropic conservatism would have caused him to remain in the plains. Another difficulty is presented in the case of the gorilla, that notorious Tory who has taken to the ground in the midst of the tropical forest. It is the opinion of the writer that man's ancestors descended to the ground in their tropical forest homes and then walked out of those forests. It seems improbable that our anthropoid precursors waited for the trees to die under them. Those prehuman ancestors " took a chance " upon the ground, because the opportunities for food-getting seemed better on earth and because a tree is an inconvenient and disadvantageous habitat for a giant primate. If one weighs ten stone and lives in a tree, he is likely to be preoccupied with the task of keeping from falling off the tree. But our ancestor was like Zaccheus, in that he came down.

In the Lower and Middle Miocene periods generalized forms of anthropoid apes of the *Dryopithecus* genera extended from the Oriental region along the Mediterranean zone to Western Europe, and in Africa probably south to the farther margin of the forest zone. During the Upper Miocene period there is evidence that the temperature dropped and more or less desert conditions prevailed over the Iranian plateau and possibly a part of North Africa. The African anthropoids were cut off from their Oriental relatives. Some of the more progressive great apes took to the ground in Africa, others in the Oriental region of Asia, and possibly still others in Europe. There is, in the opinion of the writer, a complete lack of evidence in favour of a central Asiatic area of dispersal for the protohuman stocks. Humanoid forms may have developed also on the northern border of the tropical forests of the Oriental region, but there is nothing to prove that they did so develop.



THE ABBOT'S CHAIR, WOODHURST (HUNTS.)

Place-names and Archæology

by A. MAWER

THREE years ago, when the Survey of English Place-names was initiated, the present editor of *ANTIQUITY* wrote an article for the opening volume of the Survey publications with the above title. In it he attempted to show how fruitful might be the mutual relations of place-names and archaeological studies. The Survey is now well under way. It has completed its work in four counties—Buckinghamshire, Bedfordshire, Huntingdonshire and Worcestershire (shortly to be published) and the time seems not inappropriate to take stock of some of the results achieved in this particular field of studies.

One matter which is always of interest is to note the different terms used by our Anglo-Saxon forefathers for ancient earth-works, either of their own making or belonging to an earlier age. For these, two new terms have come to light. The first is found in the name of Totternhoe Castle (Beds.). This is an ancient camp standing on a promontory of the chalk downs to the west of Dunstable. Writing in ignorance of the meaning of the name, Mr A. R. Goddard in *Victoria County History of Bedfordshire* (i, 294), says 'the position is a majestic one, and to those moving on the lower plains for miles round, the Totternhoe mound seems to keep watch on its height like some great conning-tower.' As a matter of fact the name records these very facts. The suffix *hoe* is the place-name element, so common in Bedfordshire, meaning 'hill,' while the first part is a hitherto unrecognized Old English word *tot-ern*, 'look-out house,' in which *tot* is the same word which we have in so many *Toothills* up and down the country, while *ern* is the word which has given us place-names such as *Brewerne*, 'brew-house,' *Cowarne*, 'cow-house' and a good many others besides.¹

The other word is *weard-setl*. This is a known word in Old English, meaning literally 'watch-seat.' Already, in dealing with

¹ See further *Place-names of Bedfordshire and Huntingdonshire*, 139.

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certain Hampshire charters, Dr Grundy had shown that a place there called *weardsetl* must be the well-known Beacon Hill, recently brought to public notice as the burial-place of the late Earl of Carnarvon. Now in Worcestershire three examples of it have come to light, disguised as Warshill Top and Wassel Wood (really one name) in Kidderminster, Wassel Grove in Hagley, and Wast or West Hills (both forms are found) in Alvechurch. Wast Hills and Warshill are the commanding points in their districts and Wassel Grove stands on a prominent spur of the Clent Hills. The most interesting however of the three is Warshill, for here we have what the Ordnance Survey maps mark as a camp and what the *Victoria County History* (iv, 425) describes in greater detail as a 'small work . . . nearly rectangular (three-quarters of an acre), with a ditch on all sides but the north-west, where the inner scarp has been cut into.' Here then we have the OE *weard-setl* applied to a fortified enclosure and it would be interesting to find whether there are any such traces of earthworks on either of the other two sites. In the case of Wast Hills it is very doubtful, for the site is full of the 'waste' (hence the modern form of the name) which accrued when the canal-tunnel was excavated here. As a pendant to these 'ward-settles,' we might note *Wardhowe* in Washingley (Hunts.), now Ward Mount. This is another *hoe* from which watch was kept and it is worthy of note that it is on high ground and that on it there is an earthwork-site, of uncertain date and origin. (Cf. *Place-names of Bedfordshire and Huntingdonshire*, 201).

In the study of ancient roads, and more particularly of Roman roads, certain points of interest have come to light. First we may note that our forefathers, inadequately equipped though they were as archaeologists, made a happy distinction between the Icknield Way and the great Streets—Akeman, Ermine, Watling. The Fosse Way was in those days neither 'way' nor 'street'; this is probably due to the origin of the name as explained below. The Icknield Way is always called in early times a 'way,' never a 'street' and this is technically correct; for it is a well-established fact that the Icknield Way, in distinction from the others, which are Roman roads, is a British trackway. Then it has been shown that two of the streets took their names originally from quite short stretches of them: Watling Street from the stretch by Verulamium, the old *Watling-chester*, Ermine Street from the stretch of it which runs through *Armingford* Hundred in Cambridgeshire, both *Watling* (or more correctly *Wacling*) and *Arming* being insignificant tribal or folk-names; while Akeman

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Street seems to have been so called from its leading ultimately to *Akeman*-chester or Bath.

In studying these road-names it was found that they repeated themselves with somewhat baffling frequency in various parts of the country. Akeman Street is used of a Roman road from Cambridge to Littleport; Irmine Street, from the fourteenth century onwards, was used of the Roman road from Gloucester to Silchester, and has also been applied to part of the Stane Street. Dr A. H. Smith calls attention to a charter in the cartulary of St. John's, Pontefract, in which as early as *c.* 1300 the Great North Road near Allerton Bywater is called *Watlingstrete*. Watling Street was also applied in the 15th century to the road from Ferrybridge to Worksop, and is used also of the Roman Road from York to Corbridge and the Cheviots. Icknield was used already in the 13th century of a road called *Ikenildstret*, now Ryknild Street, a well-known ancient road in Worcestershire, the curious form Ryknild Street arising from popular corruption of 'at ther Ikenildstreet,' into 'atte Rikenild.' This extended use of the names of famous ancient roads cannot be entirely due to the inventive faculty of antiquaries for it began far too early for that. The true explanation is that in the Laws of William the Conqueror, the four roads Ermine Street, the Icknield Way, Watling Street and the Fosse Way were subject to a special peace safeguarded by heavy penalties, and doubtless other roads were not slow to adopt names which implied such high standing and privileges.

Akeman Street is also applied to a second road, as Professor Ekwall has pointed out, in a Westminster charter of Edward the Confessor, where it is used as the name of a road south of Watling Street (*i.e.* the present Oxford Street), and leading to Charing (*i.e.* Charing Cross). One can only suggest that this was a case of a second road, the beginning of the great western road, which ultimately led to *Akeman*-chester or Bath and was therefore called *Akeman-street*.

On the Fosse Way one small ray of light has been shed. It seems almost certain that this road must have been called *Fos* by the English from some British adaptation of the Roman *fossa*. The road was presumably so called from a prominent *fossa* or ditch on one or both sides of it at some point or points in its course. A trace of this seems to be found in the name *Ditchford*, given to the ford which carries the Fosse Way over Knee Brook in Blockley (Worcs.), and, as Dr Grundy has pointed out, in Ditcheat (Somerset) literally *ditch-yat*

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or *-gate*, which lies by the Fosse Way. Here the *Fosse* seems alternatively to be called the 'ditch.'

Another interesting compound of *dic* meaning 'ditch' or 'dyke' is a new word *Fastendich*, with the first element OE *faesten*, 'stronghold,' which, as Mr M. M. Hughes has shown, is used as a name for the well-known earth-work called Grim's Ditch, near Hampden (Buckinghamshire).

In collecting field-names some interesting examples of names of roads or tracks and of bridges have come to light. In Buckinghamshire we have *Ferdway*, 'fyrd or army road,' *Chepingwey*, 'market-road'; in Bedfordshire and Huntingdonshire we have *Thefwey*, *Dossereswey*, i.e. road used by one who carries his goods on a pannier or pack; *Flexwey*, *Riscweg*, *Bereweg*, roads which are apparently so called from the crops of flax, rushes and barley (or corn generally) which were carried along them; in Worcestershire we have *Syllweg*, i.e., road made of baulks or sills, *Gerdweg* 'yard-way' denoting perhaps a road whose course was marked by a series of rods or posts or the like, and *Sakereswey* 'robbers' road; while from Nottinghamshire we may note *Thefstighe*, 'thief-sty or path.' Of bridge-names we may note in Buckinghamshire *Omannebrugge* or 'one-man bridge,' and in Worcestershire *Standefast Brigge*, presumably one where stoppages were frequent; *Letherenbrugge* which seems to refer to a bridge in the construction of some part of which leather was used; *Eorthbrycg*, 'bridge of earth or turves'; *Bredenbridge*, 'bridge made of *bredes* or planks'; and *Risenbridge*, *Risbridge* containing OE *hris*, 'brushwood' and *hrisen*, 'made of brushwood,' which must describe a brushwood causeway over some marshy place. *Blancheferye* in Fletton on the Nen gives an example of the word 'ferry' some 150 years earlier than any cited in the *Oxford English Dictionary* and points to an early use of a white ferry-boat of some kind across the river at this point. Coppingford in Huntingdonshire is 'merchants ford,' and its proximity to the old Bullock Road parallel to Ermine Street, calls attention to the importance of this early track-way.

One of the things upon which one is most anxious for further light is the heathenism of our forefathers, and here too the Survey has not been without results. One fertile source of information was discovered by Professor Ekwall when he noted that in certain place-names we have as the first element the OE *wig*, *weoh*, 'idol,' which may however have also had a wider sense and have been used like the cognate Norse *ve* of a sacred site, a temple. Such a sense is required

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to explain a name like *Cusanweoh* in Surrey, found in an OE charter as a place-name. It cannot mean 'Cusa's idol,' it can only mean 'Cusa's sacred site' or something of that kind. Whatever the precise sense, its use in place-names clearly belongs to Anglo-Saxon paganism. So far the names that have been noted in which this element is found are Weedon in Buckinghamshire and in Northamptonshire, Willey in Surrey, Weoley in Worcestershire.* It is probably not without significance that these heathen sites are either *duns*, i.e. hills, or *leahs*, i.e. forest-clearings. It may also be noted that Willey is not very far from the *Cusanweoh* mentioned above, or from Tuesley and Thundersley, which take their names from the old Saxon gods *Tiw* and *Thunor*. A new 'hill of Woden' has come to light in Wenslow in Bedfordshire. The site is unknown but it was somewhere in the neighbourhood of Biggleswade. *Harrow*-names have long been recognized as relics of heathendom, derived from OE *hearg*, 'heathen temple.' Arrowfield in Worcestershire, not very far from Weoley, is an additional example of these names, a place in *feld* or open country which happens to be by the river Arrow and therefore by a process of folk etymology has lost its proper initial *h*.

On names for heathen burial-sites, a little information has been found in the course of the Survey. Some years since Dr Bradley suggested that Hebburn on Tyne was derived from OE *heah* and *byrgen*, hence 'high burial-place.' This was supported in interesting fashion by the history of Burnhill in Stone in Buckinghamshire. Here the early forms suggested that we might have the same element and then it was discovered that there was an ancient barrow, explored by Mr Heneage Cox, containing skeletons belonging to the Early Iron Age or to the Anglo-Saxon period. Closely allied to names of this type are the numerous Churchills scattered up and down the country. It will be shown in the forthcoming volume upon Worcestershire that the great majority if not all of these Churchills have nothing to do with churches. They are really *Crich-hills* containing the common British word for a hill or barrow which has survived in Crich in Derbyshire, Crick in Northamptonshire, Crutch in Worcestershire. The name *Crichill* became, by a regular process of *r*-metathesis, *Kirchill*, and this, under the influence of the common word *church*, was soon corrupted to *Churchill*. This furnishes a clue to a whole

* [It is possible that Waden or Wedon Hill, overlooking Avebury in Wiltshire, should be added to the list.—Editor].

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series of English place-names and for many of them it will be necessary to have the help of the archaeologist to determine how far we have, in these names, to do with a natural hill and how far with some artificial barrow.

Another field in which the Survey has been able to make a little headway is in the discovery of some of the sites of the ancient meeting-places of the Hundred-courts and the like, and in noting some points of interest with regard to their names. In Buckinghamshire the exact site of the meeting-place of the Hundred of *Seglow* or *Seckloe* was fixed and it was shown that this name might well mean 'warriors' hill.' The Hundred of *Lamue* was shown, thanks to a suggestion of Professor Ekwall's, to contain the OE word *muga*, 'mow' or 'heap,' pointing to some artificial mound or other structure used to mark the meeting-place. The discovery, close to one another, of Skirmett and Fingest, the one a Scandinavianized form of OE *scir-mot*, 'shiremoot,' and the other a compound of the Anglo-Scandinavian *thing*, 'assembly' and *hurst*, 'wood' demonstrated the importance of the Scandinavian occupation of the county, gave an interesting pair of allied names, parallels to which have since been noted in Tingrith (Bedfordshire), really *thing-rithe* or stream, by the site of Manshead hundred meeting-place, and in the discovery in the North Riding of the names Landmoth, *i.e.* land-moot, and Fingay (*i.e.* *thing-how*) Hill close together. An even more striking group is that recently noted in Worcestershire. Clustered around Low Hill in White Ladies Aston, the 'low' from which the triple hundred of Oswaldslow takes its name, we have Spetchley or 'speech-clearing,' Stoulton, *i.e.* farm of or by the *stool* or official seat of the officer of the Hundred-court, and Swineshead, one of the meeting-places of the court. This last place adds another name to the list of the places which contain the suffix *head* combined with the name of some animal, and, as it was a Hundred-meeting-place, it definitely supports the theory advanced by Dr Bradley some years ago that these places were so called because a figure of the animal in question was set up at the place of meeting of the Hundred.

In Stoulton we have seen reference to the *stool* or seat of the official who presided over the Hundred-court. In dealing with the Hundred of Hurstingstone in Huntingdonshire an interesting discovery was made which throws some light on what such a stool may really have been. It was found that what in the old maps is called the *Hurstingstone* is what is now called the Abbot's Chair. (Plate). This was used by the abbot of Ramsey when presiding over the manorial

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court, where he doubtless sat as the direct successor of the old officer of the Hundred. The 'chair' is a large square stone in the shape of a chair, the stone itself belonging to the well-known Barnack Rag quarries in Northamptonshire. This would suggest that in some of the numerous Hundred-names which contain *stone* as the second element we may well have reference to the presiding officer's seat rather than to any kind of boundary stone such as has commonly been suggested.*

Such are a few of the results achieved from three years' work over four counties. Hitherto, and for a good many years to come, it is clear that it can only be a case of adding slowly to our stock of knowledge a number of small yet often highly significant facts. The time for generalizations is still far distant. The time may come when a skilful combination of place-name and archaeological studies may do much in enabling us to reconstruct the story of the English settlements in this country. For the present we must rest content with slowly piecing together the fragments of the body of Truth. Here much remains to be done, and it can only be done from a study of the new material which lies ready to our hand if only means and energy are forthcoming to work it. Nearly all of the discoveries here set forth are due to the study of MS material in early documents still unprinted. One can say without exaggeration that every new document studied, even down to the fifteenth century, yields matter of importance for the business in hand. The generosity of the British Academy has enabled a great deal of steady work to be done upon material of this kind, but there is room for endless extension of this work and none of it will be without its results. Work upon documents must however go hand in hand with topographical, and still more with archaeological, work upon the ground itself. It is sad to reflect that one can probably count on the fingers of one's hands the number of Anglo-Saxon charters out of a total of several hundreds whose bounds have been worked out on the ground itself, with a view to identifying the sites of the various

* It should however be stated that, in the opinion of the Royal Commissioners, the Abbot's Chair is in reality the base of a medieval cross of which one side has been weathered or cut away ; so that the original square socket for the shaft has now only three sides. If this is so, it looks as if the chair, though it may be on the site of the Hurstingstone, is not the stone itself. There are other examples of early Hundred meeting-places which take their names from crosses ; but I do not know of any instances where such a cross is referred to as a 'stone.' See *An Inventory of the Historical Monuments in Huntingdonshire*, H.M. Stationery Office, 1926, p. 296, pl. 142.

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' heathen burials,' ' barrows,' ' boundary stones ' and the like with which they are filled. We owe a very great debt of gratitude for the laborious care with which Dr G. B. Grundy has worked out the charters of Wiltshire, Hampshire and other counties with the aid of the six-inch Ordnance Survey, tithe awards and the like, and he has made many notable and enlightening discoveries, but one must bear in mind that maps will not tell us everything, and that the charters will only reveal their full secret when they have been worked out on the ground itself. Mr C. A. Seyler, of Swansea, has done some excellent work of this kind on certain charters, especially on one or two dealing with land on the borders of Worcestershire and Gloucestershire, but such cases are far too few. As Dr Grundy has himself pointed out the task of tramping the bounds of the charters of even a single county is a very big one for any individual worker, and here, as in so many other spheres of work, it is clear that the solution of the problems will only be attained when co-operative work has been organized so that in each county for which we have charters we have one or more scholars who have definitely set themselves to the task of working them out.



THE APOLLO OF VEII, IN THE VILLA GIULIA MUSEUM, ROME
Ph. Alinari

The Etruscans

by D. RANDALL MACIVER

IT is surprising how little classical authors of the time of Augustus choose to tell us about the Etruscans. For Livy, Vergil and their contemporaries it might almost seem as if the Etruscans had already become a dim legendary background to history, hardly less unreal than King Arthur is to us. If they ever knew the facts they have taken great pains to conceal how much of their state religion and political organization was due to Etruscan rulers, and how completely the city of Rome itself was based upon Etruscan foundations. This is to some extent the result of a deliberate conspiracy. It was the set policy of the Augustan writers to suppress everything that did not obviously tend to the enhancement of Roman prestige; it was their policy to distort facts, to invent legends and to carry into their literature the same single-minded fanaticism that had made the success of their nation in politics and war. We must not look therefore to the Latin writers for any scientific account of the extraordinary people that preceded the Romans almost everywhere in North and Central Italy, and, but for some strange inherent weakness, would have ruled the whole peninsula in their stead. Merely as a prelude to his story of the rise of Rome, Livy tells us that Etruria had 'filled with the renown of her name the whole length of Italy from the Alps to the Sicilian strait.'

It seems evident that the Etruscans themselves had no native historians. Whether they kept even the barest record of annals is more than doubtful; so that if the Emperor Claudius, the earliest of Etruscologists, really composed any sort of history we have probably lost little by the accident of its disappearance. For literary evidence the modern student has to rely principally upon a few dozen more or less casual and incidental allusions gleaned from scholiasts or lexicographers, eked out with the fragments of antiquarianism in Varro; or upon the occasional references in Greek writers who, from Aristotle to Dionysius of Halicarnassus, are uniformly inspired by the same spirit of rancorous jealousy and malevolence. What we know of the

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Etruscans is due far more to archaeology than to written records, and in many cases it entirely reverses the verdict of those who have tried to build upon insufficient literary documents.

There is, however, one great exception which proves once again that the 'father of history' is worthy of all reverence. Herodotus in his first book gives an account of the origin of the Tyrsenoi, who he says were a Lydian people driven by stress of famine to leave their own country and to settle among the Ombrioi. This legend was universally accepted in antiquity, the only discordant voice being that of Dionysius of Halicarnassus, who based his contradiction partly on accidental or deliberate mis-readings of Herodotus and partly on the authority of a work of doubtful authenticity which was claimed to be written by Xanthus, a Lydian historian. The Lydian origin of the Etruscans was taken as a matter of course by Vergil, Horace, Ovid and the later poets, as well as by Cicero, Seneca and Pliny. But it must be admitted that this unanimity has no value as an argument, inasmuch as it all rests upon respect for the same single original authority.

It is really archaeology which has decided the question and has recently shown that, apart from any picturesque embroidery of detail, Herodotus was right in his main statement that the Etruscans came from Asia Minor. Whether their exact provenance was Lydia or some other part of the Asiatic coast is not yet determined, but the general region is well ascertained. I cannot here go into the details of the argument, but must be content to say that the Asiatic origin of the Etruscans is now accepted without question by the best modern scholars, whether of Italy, France, Germany or England. And it is further accepted that the route was not by land but by sea. This is a remarkable conversion of opinion, as until very recently all historians were following the ideas of Niebuhr, according to whom a great invading host marched by land over the eastern passes of the Alps and descended upon the plain of the Po, from which they would have gradually spread into Tuscany and Umbria. Apart from the fact that no ancient writer gives the slightest countenance to this theory, it has been conclusively disproved by archaeological discovery, which has shown that there were never any Etruscans east of the Apennines until the end of the sixth century; but that the principal coast-towns of the Maremma, such as Corneto and Vetulonia, had been founded in the ninth.

Niebuhr's theory simply inverts the true sequence. The first settlements were actually made on the sea coast of Tuscany; thence colonies were sent out which only two or three centuries later spread

THE ETRUSCANS

to the eastern side of the Apennines at Bologna, and penetrated down through Latium to Campania. In the course of this territorial expansion, which reached its height about the year 500 B.C., the Etruscans occupied Rome itself and impressed their stamp indelibly upon the nascent Roman state. For the Etruscan domination of Rome is no longer dismissed as a myth; it is an obvious historical fact, whatever be thought of the legends and embroideries which later writers wove around it.

The date of the Etruscan migration from Asia is approximately fixed by the results of excavations in Italy. We know from observations made upon sites like Vetulonia, which were continuously inhabited before and after the arrival of the invaders, precisely what the native civilization was from at least the 10th century downwards. It shows not the slightest trace of Aegean or Hellenic influence, until suddenly, a little after 800 B.C., there appears a new burial rite, inhumation instead of cremation, accompanied by a flood of new objects, all obviously imported, which are of well known near-oriental character. Allowing that graves would not be numerous for half a century after the first landing, it follows that the actual date of settlement was the middle or the end of the 9th century. Corneto and Vetulonia were the oldest cities but others were founded very soon afterwards, often it may be supposed by new arrivals from Asia Minor. For the whole movement may be best conceived not as the sudden irruption of a great host carried in a large fleet but as a steady and perhaps more or less peaceful colonization by stages. We are reminded of the settlements made by the Norsemen in their almost annual visitation of our Scottish coasts, as narrated in the Icelandic sagas. It was the triumph of small numbers over less civilized natives, inferior in arms and experience of all kinds. Throughout their history the Etruscans remained a small and narrow aristocracy, acting as overlords to the Italians amongst whom they had settled. No doubt they imposed their language to a great extent over the territory which they controlled, though it may have been in a corrupted form that it was spoken by the peasantry. Some useful analogies might be drawn with the use of Norman-French in England during the 12th and 13th centuries after Christ. Etruscan remained the normal, or at least the official, language of Etruria for some time after the Roman conquest, but ultimately it gave way to Latin. It is perhaps not too fanciful to trace in the harsh aspirating of the modern Tuscan dialect the persistence of a tendency which has come down from the Tyrsenoi. For the name of the invaders as

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transmitted to us by Greek writers was Tyrsenoi, or in a later form Tyrrenoi. Dionysius indeed says that they called themselves Rasenna from the name of one of their chieftains. I do not understand why most writers tamely accept this. It is evident that Dionysius knew no more about the Etruscans than Dr Johnson knew about the Scots, but we should not have felt obliged to change our established nomenclature if Dr Johnson had chosen to state that all Scots were called, for instance, Campbell. Tyrsenoi is the name that has left its abiding impress on history, geography, and etymology. Philologists state that 'enoi' is a termination found widely over Asia Minor. 'Tyrs' has often been connected with the name Tursha mentioned on the Egyptian monuments together with Lukki and Akaiwasha, *i.e.* Lycians and Achaeans, as invaders of Egypt in the 13th century B.C.

The language is unlike that of any other people. All attempts to prove it of Indo-European origin or affinities have totally failed; and the mere fact that it has no affiliation whatsoever with any language spoken in Italy would be enough to show that the Etruscans are not autochthonous in that country. But to what family of languages it really belongs remains an unsolved problem. The best authorities are disposed to admit that there is a certain degree of morphological connexion with near Asiatic dialects, but the scant comparative material as yet available has not shown any positive connexion with Lydian. On the other hand a stela found at Lemnos is considered to be very closely related, if it is not indeed actually written in Etruscan. Further explorations and researches in Asia Minor may be expected to throw some light upon the problem before many years have passed.

But though we may hope some day to discover the parentage and relationships of the language it will be no more than a philological victory which will be gained thereby. If the 'key to Etruscan' is ever found it will be the key to a door which opens on an empty chamber. For there is nothing written in Etruscan which could possibly tell us anything of the history or customs of the people; the most that might be learned would be a few details of religion and ritual. It is true that there are some 8,500 so-called 'inscriptions' in existence, but with the rarest exceptions they consist only of one or two words. The most usual 'inscription' is an epitaph giving no more than a personal name, a statement of relationship, and the length of the life. There are only nine inscriptions which contain anything like thirty words apiece; it is obvious that these cannot convey much information even when they are deciphered. A clear understanding of this fact is

PLATE II



TOMB-STONE OF WARRIOR NAMED "LARTHI ATHARNIES"
DATED ABOUT 700 B.C. OR EARLIER (FLORENCE MUSEUM)

facing p. 163

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necessary to prevent the raising of any false hopes. And it must be understood that it is no discredit to philology if all the labour and intelligence expended has produced little result ; nothing appreciable could be effected with such material. Nor will a bilingual inscription work miracles if ever one should be found.

Actually the longest document in existence has a very curious paternity. It is written on the linen wrappings of a mummy found in Alexandria about fifty years ago and now in the museum at Zaghreb [Agram]. There are 1,500 words, which, with allowances made for repetitions, means really 500. From the numerous names of gods it seems certain that the context is of a religious character, probably consisting of extracts from the 'Acherontian books' mentioned by Roman writers.

If the language remains a mystery there is nothing difficult about the alphabet, which is simply a derivation from an early—but a *very* early—Greek alphabet. Old fashioned historians persist in repeating the threadbare assertion that the Etruscan alphabet was borrowed from the Greek colony at Cumae ; but modern criticism has shown good ground for believing that it was of quite independent origin and presumably brought over from the original home of the Tyrsenoi. Three early examples of it are extant ;—one carved on an ivory tablet from Marsiliana in the museum at Florence ; one scratched on a pottery jar from Veii (Formello) in the Villa Giulia at Rome ; and the third scratched on another pot from Caere now in the Vatican museum. Of these, the Marsiliana example certainly belongs to the first half of the seventh century ; the others are probably of much the same date.

This alphabet differs in several respects from the Chalcidian alphabet known at Cumae, notably in retaining two letters, the fifteenth and eighteenth, which correspond to Phoenician consonants. In the Formello version the fifth and sixth letters are inverted from the order which they hold as sixth and fifth at Marsiliana and Caere.

One of the earliest inscriptions of Etruria is seen on the grave-stone of a warrior known as Avtilis Feluskes, in which the peculiar Lydian letter 8 is used for 'f.' Of the same approximate date—about 700 B.C. or earlier—is the figure of a warrior reproduced on plate II. This name is written as Larthi Atharnies.

But the art of the Etruscans even in the 8th century was of a far higher character than these rude effigies suggest. Sculpture, in which they were soon to rank so high, was still in its infancy, but the minor arts of goldsmith and coppersmith had been brought to a high pitch of

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	Marsiliann	Formello	Cerveteri	
1.	A	A	A	= a
2.	B	B	B	= b
3.	C	C	C	= g
4.	D	D	D	= d
5.	E	F	E	= e
6.	F	E	F	= f
7.	I	I	I	= z
8.	H	H	H	= h
9.	Θ	Θ	Θ	= th
10.	I	I	I	= i
11.	K	K	K	= k
12.	L	L	L	= l
13.	M	M	...	= m
14.	N	N	M	= n
15.	Θ	Θ	Θ	= s
16.	O	Θ	Θ	= o
17.	P	P	P	= p
18.	M	M	N	= s
19.	Q	Q	...	= q
20.	Q	P	P	= r
21.	S	Ξ	Ξ	= s
22.	T	T	T	= t
23.	Y	Y	Y	= y
24.	X	X	X	= cs
25.	Φ	Φ	P	= ph
26.	Υ	Υ	Υ	= ch

THE ETRUSCAN ALPHABET: FROM DUCATI'S "ETRURIA ANTICA"

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excellence. It was natural that the coppersmiths should be particularly skilled inasmuch as this was the oldest of all the crafts in Etruria. The native Villanovans had been quite notable workers in bronze before ever strangers came from the east to instruct them. It was undoubtedly the presence of extensive deposits of copper and iron in Tuscany and the neighbouring island of Elba which tempted, first the Villanovans and then the Etruscans, to settle there. These mines were exploited for many centuries and were always one of the main sources of the wealth and power of the Etruscans. The working of iron took a fresh impetus under them, the ore being brought over from Elba and smelted on the mainland at Populonia, where numerous slagheaps of the Roman period have proved worth reworking in modern times. To the excellence and abundance of their weapons both of bronze and iron may be attributed the rapid military successes of the Etruscans. They were however excellent administrators in other respects, introducing new methods of agriculture, draining the marshes and planting vines as well as olives and grain. Almost the whole country when they arrived was covered with dense forest, which not only provided the wood for furnace fires, but supplied the timber required for shipbuilding. As a sea power the Etruscans, who must have been sailors in their original home, soon became extremely formidable and dominated the western coast, allying themselves sometimes with the Carthaginians against their common enemy the Greeks. Thus it was the result of a sea-fight against the Phocaeans in 540 B.C. which brought Corsica under Etruscan domination. Soon after this their empire—to use a word which is convenient though not very accurate in this connexion—had reached its greatest extent and began to crumble. If the expulsion of the Tarquins from Rome was merely a local incident it was yet significant as one of the first stages in a struggle which soon involved the Etruscans in fighting simultaneously on three fronts, against Samnites in Campania, Romans in Lower Etruria, and Gauls on the northern border. In these wars they were robbed of all their external territory and eventually lost even their own independence. The last stages of the conflict, described by Polybius, may be said to end just before the outbreak of the first Punic war in 264 B.C.

If in the mortal struggle against all the enemies that surrounded them the Etruscans were eventually worsted, it is not necessary to attribute their failure to effeminacy or loss of courage. Their political organization was a loose confederacy; at no time was there a single capital or single head. Each city developed independently and often

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made war on its own account without calling in its confederates. Consequently the Romans, pitilessly concentrated on a single aim under unified leadership, were often able to destroy their adversaries piecemeal. But the stubborn defence maintained for years by a single city like Veii is ample proof of the warlike vigour and tenacity of its people. The philistine Romans doubtless considered that art was incompatible with manhood and that the gods punished all who neglected strict business. And the envious Greeks were at all times delighted out of sheer malice to retail stories attributing to the Etruscans an immorality and luxury which were evolved from their own imagination. Some of the Greek statements can be proved to be absolutely untrue, and there is no need to give overmuch credence to any of them. It is quite clear that the character of the Etruscans will always be misrepresented by historians who repose a blind faith in either Greek or Latin writers.

It is the business of the archaeologist to redress the balance and to use the documents, unwritten but not difficult of interpretation, supplied by the Etruscans themselves in their painted tombs. The publication and the study of these paintings is making rapid progress ; like the Egyptian paintings they give innumerable details of daily life. To them must be added stories and ceremonies recorded on bronze vessels like the *situla* of the Certosa from Bologna. And the harvest of excavations, intensified during the last forty years, has added material for almost endless study of arts and crafts.

Etruscology is of course nothing new ; sporadic discoveries of objects of art were sometimes made as early as the fifteenth century. In 1616 our countryman Sir Thomas Dempster, living at Pisa, published a book *De Etruria regali* which was considered of great importance. During the 18th century several museums were founded in Italy ; painted tombs were studied and there was a wide epidemic of what has been called Etrusco-mania, during which everything of interest and beauty was attributed to this one people. It was this period which initiated the error of calling Greek painted vases Etruscan, an error of which echoes may still be detected in various popular books of our own day. The great development of Greek archaeology has dispelled such misunderstandings ; but now there is a quite perceptible danger in the opposite swing of the pendulum. The best modern critics and writers are so dyed in Hellenism that they are apt to approach the whole subject of Etruscan art and culture from a prejudiced standpoint. Everything that is good in Etruscan work is attributed by them not merely to Greek influence but even to Greek workmanship.

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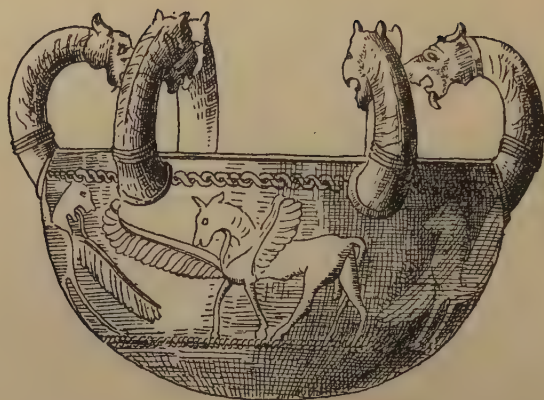
It has been a fashion for many years to assume that there was no indigenous civilization in Italy underived from Greece. Slowly it is being appreciated that this was an error, and that long before Greek merchantmen passed the straits of Messina there were strong centres of civilization in north and central Italy which owed nothing to Greece or to the Aegean. Now it is necessary to go further and to analyse the multiple sources which contributed to form the Etruscan civilization. It unquestionably owed much to Greece, but it also owed much to a general Aegean culture of which Greece formed only a fractional part. Behind this is a permanent background composed of a heritage of near Asiatic feeling and tradition particularly noticeable in the religion. And finally there is a core of original native genius which hardly any writer has yet attempted to value impartially.

To discuss these statements in detail would require many pages ; here I can only make a few broad generalizations. Briefly then I would say that for the first 150 years, from 800 to 650 B.C., the Etruscans owe an immense deal to the Aegean and the near-East, but very little to Greece. From 650 B.C. onwards that remarkable susceptibility to new influences, which reminds us somewhat of the Japanese, leads them to adopt every new fancy or invention, and the new inventions of this period were almost wholly of Greek origin. But throughout the whole time down to at any rate 500 B.C. they were not mere imitators but creators of a new school which bears the impress of fresh and original genius.

In estimating the artistic originality of the Etruscans it must be remembered that they were probably quite expert craftsmen before ever they sailed to Italy. The first bronzes that appear in the circle-tombs of Vetulonia, before 700 B.C., are very remarkable products. The huge cauldrons were thought good enough to send as offerings to Olympia. A cauldron of some forty years later from Caere is shown, with the support on which it stood, on page 168.

Jewellery of gold and silver is abundant in tombs of about 700 B.C. and, even if some of the earliest specimens may have been imported, internal evidence shows clearly that the majority of gold fibulae, bracelets, pins, etc. were of local manufacture. Numerous examples in repoussé, or in the extraordinarily difficult technique of granulation, have come from the tombs of Vetulonia. Several of these are shown on page 170, taken from Karo's classical article on the jewellery of Vetulonia, in Milani's *Studi e materiali*.

It is however rather in the early seventh century than in the eighth



1—CAULDRON FROM CAERE (*circa* 650 B.C.)

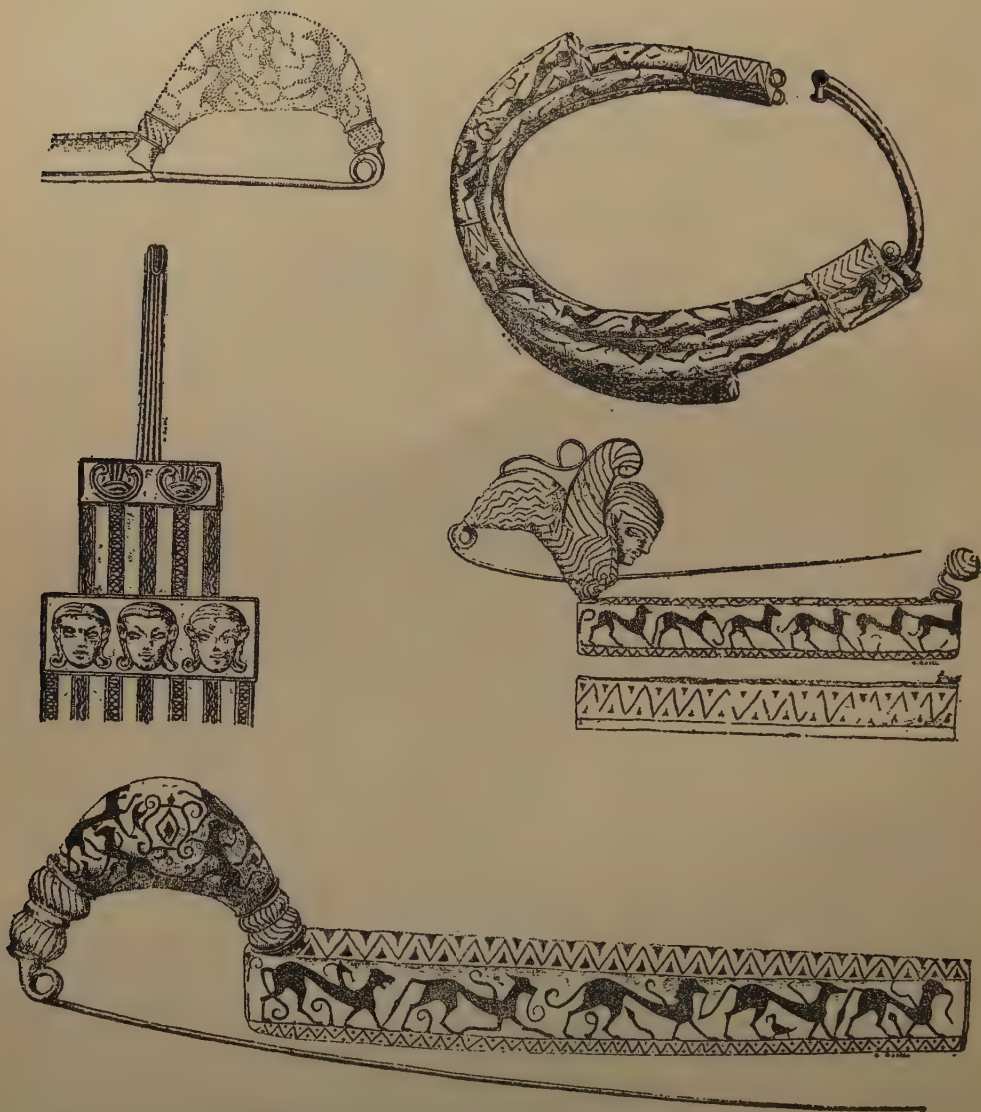


2—STAND FOR THE ABOVE

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that we should place the highwater-mark of an Etruscan art still untouched or very little affected by the Greek. Dating from about 670 B.C. there are three famous tombs, one from Caere and the other two from Praeneste. The contents of these tombs may be seen severally in three museums at Rome, *viz.*, the Vatican, the Museo Preistorico, and the Villa Giulia. A detailed inventory of these three tombs would require a complete memoir to itself. There are silver bowls with long processions upon them; ivory carvings of men and animals and fabulous beasts; gold pectorals and clasps, some of the most exquisite taste and others less beautiful but exhibiting an amazing mastery of technique. Much of this work is doubtless imported but none of it is Greek, though it may be Phoenician, Cypriote, or in a general sense near-Oriental. But with it all is fine bronze work in enormous quantity—beds, and thrones, and chariots, cauldrons, bowls and innumerable other objects large and small, none of which can be regarded as imported. All this, and perhaps much of the jewellery, was made in Etruria, presumably by Etruscan workmen.

From the middle of the seventh century the Greek influence becomes predominant; the centres of importation have changed; Corinth is a principal source of supply; and much Ionic work, soon followed by Athenian, comes in through the Greek colonies in southern Italy. But the independence of the native character often shows itself quite strongly. The invention of a new class of pottery, the famous *bucchero*, is not in itself a great achievement but it is one among many indications of the extraordinary skill of the Etruscan potters. This was exercised however on far more important subjects than small vases; the greater part of the statuary was made in terracotta before ever the Etruscan bronze figures became famous all over the Mediterranean. Temples were not architectural constructions; they were built of wood, with at most a foundation of stone, but they were externally decorated with fictile ornaments in polychrome terracotta, and the shrines within were furnished with terracotta figures of the deities. That the fame achieved by the Etruscan sculptors was thoroughly well-deserved is proved by a group from Veii of which one figure, the Apollo, is virtually complete (plate 1). It is the most important surviving example of Etruscan art, much earlier and even more interesting than the amazing bronze chimaera of Arezzo, and far more interesting than the magnificent bronze chariot of Monteleone, because this is entirely dominated by the foreign Ionic style. If there is Greek influence in the Apollo of Veii it is very slight; the whole



ETRUSCAN GOLD JEWELLERY FROM VETULONIA : FROM MILANT'S "STUDI^o E MATERIALI"

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spirit of the artist is spontaneous and original. This is the conception of a great master, executed with a technical skill never surpassed.

The Apollo, now in the museum of Villa Giulia at Rome, has a peculiar interest for all those whose primary study is the history of Rome, because it is the work of one of those Veientine sculptors who were employed as we know to decorate the Capitoline temple. This was built by the Etruscan kings during the last years of the sixth century in honour of that triad of gods whom the Romans represented as Jupiter, Juno and Minerva.

I have spoken of the primitive character of temple-buildings, but Etruscan architecture is a subject too difficult and obscure for treatment in this place. It has never been scientifically and thoroughly studied with a critical appreciation of the differences of period. There is some reason to think that it was only gradually evolved on the soil of Italy, as the earliest years have so far produced no remarkable works of building. In the seventh century there are various tombs which show analogies of style with different parts of the Aegean, but it would be dangerous to found wide-reaching theories upon these resemblances. In the time of their greatest power however the Etruscans were skilful engineers and builders, who may well have taught the simpler Romans much of the science for which these afterwards became renowned.

The debt which Rome owed to Etruria is enormous and beyond all estimate. In one sphere only it has been fully and honestly acknowledged by Latin writers ; this is the sphere of religion and of ceremony. We have seen that the earliest temples in Rome were built by the Etruscans and must infer that the gods who preceded Jupiter, Juno and Minerva were Etruscan deities with Tinia, rather than Zeus or Jupiter, as their chief. But this was no passing phase. The whole fabric of the official state religion and the calendar with its machinery of Ides and Fasti were derived from Etruria. Down to the time of the Emperor Julian, Etruscan diviners were part of the general staff of every Roman army. The martial organization of the army itself, the dress and ornaments of a triumphing general, were Etruscan, From Vetulonia were derived the insignia of the Roman magistrates, the curule chair and the lictors with their fasces, the purple toga and the trumpets. In countless details of their public and private life the Etruscan origin of Roman civilization is manifest. One last point remains to be mentioned—the name of *Rome* itself is probably Etruscan.

Christian Vikings

by W. G. COLLINGWOOD

MOST writers, ancient and modern, represent all Vikings as enemies of Christianity. It seems to be still believed that wherever they went, and at all periods, they sacked churches, massacred monks and nuns, and played havoc with civilization. That was certainly the view of politicians and chroniclers from Alfred to William the Conqueror. Even recent historians repeat the charge, sometimes with quite unnecessary emphasis.

In this article it is not proposed to whitewash the race in all respects—that would be impossible—but to bring forward certain scraps of evidence, not generally recollected, to set off against the too universal chorus of reprobation. In a word, there were such people as Christian Vikings; that is to say the immigrant Danes and Norse of that turbulent age, though always pirates on occasion, softened their manners as time went on, long before their general conversion to organized Christianity. Strange to say, some of the churches that are still with us owe their foundation to the Viking settlement in Britain.

Time was needed for the transition from “the fury of the Northmen,” attracted by the wealth of the churches rather than by any sort of inverted crusade or anti-Christian enthusiasm, as some have imagined. And yet the change began to appear even in their first generation. Irish annals are dismal reading all through that age, and none the less because we find how often the Christian Irish themselves did the things of which the ‘Gentiles’ are accused. But the plundered churches were plundered again in a few years; their ruin was only partial, and restoration seems to have been the rule. At such places, clerics lived on to good old age though some, here and there, suffered martyrdom. And even of the Vikings who had come as heathen, instances of conversion can be given.

Queen Aud, the widow of Olaf the White at Dublin, was a christian before she went to Iceland about 892. With her, as ninth century christians, the Landnámabók names Helgi Bjóla, her brother, who had settled in Iceland before her, and Ketil the Foolish (so they thought

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him, no doubt), her nephew, who settled at a place where formerly Celtic monks had lived, "and heathen could not dwell there" says the old book. About 890 came Helgi the Lean, the man who prayed to Christ when he was at home, but to Thor when he was at sea or in a tight place. Among early Icelanders were Jörund the Christian and Örlyg the Old, whose story is much to our purpose. He had been brought up in the Hebrides by a bishop named Patrick, who fitted him out with wood for building, consecrated earth to put under the pillars, an iron bell and a service-book (*plenarium*), and told him to build a



FIG. 1—RUINS OF ST. PATRICK'S CHAPEL, HEYSHAM, BEFORE RESTORATION

church to St. Columba at a place he described, for pre-Viking clerics knew something of Iceland. The first landing he made is still called Patreksfjord, after the bishop; and when he found the place described he built the church and "he and his kinsmen believed in Columba."

Another Icelfander who had come from Caithness used to pray before the cross, "Ever good to old men; ever good to young." Another, named Ásólf, lived as a christian hermit, not without persecution, and long afterwards was "remembered as a most holy man." Indeed the early twelfth century author of the *Landnámabók* ends by

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saying that "most of the settlers who came from west over sea (Britain and Ireland) had been baptized, and some of them held well to their christening to the day of their death; but in few cases did this pass from them to their children," and so Iceland relapsed into paganism for nearly a century until the general conversion in 1000 A.D. The Christianity of these ninth century Vikings was at no time organized; it was highly elementary at best, though it was something more than the mere 'prime-signing' that gave some of the heathen the liberty to do business at christian markets. But it was not a forced conversion, as in Norway under King Olaf; so far as it went it was sincere. It left them unmitigatedly ready to fight; but then the christian warrior is a consecrated type. On a monument at Gosforth in Cumberland, there remains, rudely cut and battered, his effigy; more like Thackeray's idea of Colonel Newcome than anything else.

Now all this change must have come about in Ireland and north Britain, with the first and second generations of Viking immigrants. Inter-marriage, of which there are many examples, was an important factor, no doubt. Church-robbing went on, but it would have gone on, Vikings or no Vikings. At last we come to an entry like this, in the Ulster annals of 920:—"The spoyle of Ardmach the 3rd of November . . . by Godfrith O'Hivair [grandson of the old Ivar who killed St. Edmund] with his men, who saved the houses of prayer with their people of God ['Culdees'] and lepers, and the whole church towne, unless some howses were burnt through neglect." It was not the Norse who wrote this entry, but the Irish chronicler, their enemy. Then in 962 or 963, noting the plundering of Kildare, he tells us how the clerics were held to ransom. And in 972 the Viking lord of Limerick himself sought refuge in a famous sanctuary. It is clear that during the tenth century the Irish Danes and Norse had adapted themselves to environment to some extent.

In England the change was more rapid and decisive. In 878 the archbishop of York, after a dozen years of refuge in Wharfedale, was able to take his accustomed place at the capital. In 883 the Danes elected a king who was already a christian; the story is hagiologic in its details, but the fact of general tolerance, if not conversion, tallies with history. In 900 the see of Lindisfarne was re-established at Chester-le-Street. Things did not go on quite smoothly, as we see from the story of that *filius diaboli*, Olaf Ball, who resisted the bishop and shouted in the church that his strong gods, Thor and Odin, were better than St. Cuthbert; for which he was promptly struck down

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dead by the Saint's power. This would be about 921. But the great series of grave-stones, reflecting in Yorkshire the Danish taste in art, shows that there was a general acceptance of Christianity, at least from about 930, when the Danish 'Jellinge' style of ornament came into vogue on both sides of the North Sea and fixes the date of these monuments.

On the western coasts of Northumbria, in the country between Wales and Galloway, Danes did not settle. There is, however, a mass of cumulative evidence to show—and the evidence is now favourably regarded by scholars—that Celto-Norse Vikings settled from the earlier part of the tenth century onwards. The place-names have been treated by Professor Ekwall, who suggests about 920 or so as the beginning of this settlement in Cumberland; it was earlier in the south of this area, if we take Ingimund, who came to Cheshire from Dublin in 900, as the first. In Iceland the process of colonization went on, the author of the *Landnámabók* says, for sixty years; and in north-west England it was no doubt as gradual. The earlier pagan raiders have left such remains as those found in the barrows at Aspatria and Hesket in Cumberland, and perhaps the great silver fibulae from Dacre and Casterton, distinctively Norse and tenth-century. But when these people came to stay, they buried their dead under tombstones modelled on the christian types they found in the country and at sites which ever since have been christian graveyards. These tombstones are not exactly like those of the Anglo-Danish group in east Northumbria; they are Anglo-Norse. No more are they pagan, as used to be said by some antiquaries of the last century; the christian emblems they bear, their cross-form and their sequence in type from the great series of christian monuments in Britain show that they were put up to commemorate christian Vikings.

The Anglo-Norse series begins perhaps with the rude slabs, like those of Craignarget in Galloway and Aspatria in Cumberland, bearing the *swastika*, which does not appear on pre-Danish Anglian crosses, but seems to have been learnt by the Norse from eastern Christendom. It was already a Byzantine form of cross, and the road through Russia had been explored in the ninth century and was freely used in the tenth. The series continues with carved crosses and hogbacked recumbent stones, of which the earlier cannot be later than the Manx crosses by Gaut Bjarnarson, whom Dr. Haakon Shetelig has dated from about 930 onwards. It culminates in the great Gosforth cross, with its round shaft imitated from other parts of northern England, and with

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its curious figure-subjects which seem intended to illustrate the Edda. Typology would place this cross about 1000 A.D., but after this there is still a long series of monuments carrying on the developments of the Anglo-Norse style far into the eleventh century. And as these are adapted from pre-Norse art, they show that the Viking Christians settled down, apparently without much friction, alongside of the native Cumbrian and Anglian villages still traceable in the Norse-settled district by their place-names.

Several churches in this Norse-settled district appear to have been founded in the Viking age. They have monuments of that age, but not earlier, and their ancient dedications are not native but Celtic. When we find the names of SS. Patrick, Bridget and Columba in these parts, where they never preached (speculative theories that they did so are only based on these dedications), and when we remember the great distance between their days, their racial interests and their religion, separating them from the Anglian church of the seventh to the ninth centuries, we cannot believe in a continuous tradition reaching back to the fifth or sixth century. There are no definite traces of the pre-Anglian Cumbrian church except the name of St. Kentigern, and that may be a re-introduction rather than a continuous survival. But when we see that settlers from over the Irish Sea came here in the tenth century, and that they were more or less christian like Örlyg, who carried the cult of St. Columba to Iceland from the Hebrides; when we find the relics of such people at the churches dedicated to Gaelic saints, and the place-names they gave attaching to the sites; then the suggestion that the Patrick, Bridget and Columba churches were founded by Celto-Norse settlers is the only interpretation of the facts. A few instances will explain more clearly.

At Heysham near Lancaster are two ancient buildings, the church of St. Peter and the chapel of St. Patrick just above it. Close to St. Patrick's are rock-cut graves; the chapel itself is in plan like a Celtic oratory of the tenth century, but it has a round 'Saxon' arch to the doorway and jambs of long-and-short (fig. 1). The church of St. Peter shows twelfth-century work and even earlier features; it was granted to the abbey of Séz in Normandy in 1094 but is not mentioned as a church in Domesday Book, so that we can date the first stone building pretty closely to about 1090. But there must have been an Anglian church on the spot two hundred years and more before this Norman rebuilding, because in the churchyard were discovered a cross-shaft of the first half of the ninth century, a cross-head of perhaps a little

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later (fig. 2), and the base of a cross. There was also found here the hogback, very rude and curious but certainly of the Norse series and dating 1000 A.D. or rather later (fig. 3). How can we fit these facts into the history of Heysham?

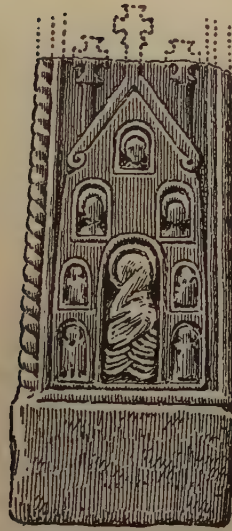
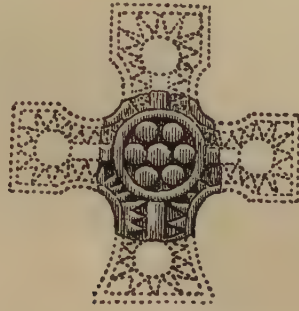


FIG. 2—NINTH CENTURY SHAFT AND
CROSS-HEAD, HEYSHAM

We have a ninth-century Anglian church, no doubt of wood. Early in the tenth century we read that Vikings were raiding, before they settled, on this coast; many other instances suggest that the clerics were driven away by that danger. Some time between 920 and 950 the Vikings gave up raiding and began to settle here. They

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would find St. Peter's deserted and decayed ; they were by this time christianized and would need the proprietary chapel frequently attached to a capital settlement. Such a chapel would be built by Anglian masons, but to the plan of the new-comer from Ireland, and the name of St. Patrick, which appears to be traceable here as far back as the earlier middle ages, needs no further explanation. Near it are the rock-cut graves of the Norse family ; the hogback, found below, was probably brought down to serve as a building stone, for we know from very many examples how the Normans used monuments of the previous age in their masonry. And as to the late legend of St. Patrick's landing at Heysham, it may be regarded as a myth of explanation, like that by which the fourteenth-century monks of St. Bees tried to explain their own name. *Sancta Bega* pretty certainly meant the old Norse holy ring on which oaths were sworn, and it is recorded that such a



FIG. 3.—THE HEYSHAM HOGBACK

ring was so used there in the thirteenth century ; but its meaning had been forgotten, and a story of St. Bega was required. They thought they found the name in Bede's *History of the Church*—Begu, the nun of Hackness ; they had some traditions that the place was founded by settlers from Ireland, and so they brought Begu from thence, and dressed her up with all the common-form of hagiology in a long story which may still be read with interest, if not edification. At Heysham or Lancaster there was no doubt a similar tale to explain, ' Why St. Patrick's ? ' and the substance of it is handed down. But its historical value is nothing at all ; less at any rate than the inference that the chapel was founded by a christian Northman, somewhere about 950, from Ireland.

The name of Patrick occurs also at *Aspatria*, which was formerly written *Ask-patric*, meaning Patrick's ash-tree, and in *Patterdale*,

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formerly Patrick-dale ; but in neither are we sure that it meant the saint. Patrick de Culwen was medieval owner of Bampton Patrick and Preston Patrick in Westmorland, and this may account for the dedication of the church of Bampton. But St. Patrick's at Ousby, anciently Ulvesby, the house of Ulf, who by his name may have been a Norseman, looks like another example of a church founded by a Viking.

To St. Bridget there is a church at Beckermest in west Cumberland, near another to St. John the Baptist ; both are ancient dedications, and both have monuments of the Viking age and none earlier. The two round-shafted crosses at St. Bridget's, one with a curious inscription which seems to be Gaelic, show the same blending of Anglian tradition with Norse motives of ornament ; they date to the early eleventh century and suggest a Norse founder in the tenth. Other Bridget churches in the same Norse-settled area are Bridekirk and Brigham, both with carved stones of the late tenth century but not earlier ; both therefore come into our series. Kirkbride was so named by the twelfth century, and is certainly an old name ; but as the church was then rebuilt with Roman stones and in spite of restoration has never been explored down to the foundations, pre-Norman monuments have not been found. The same may be said of Moresby ; and with this we have named all the Bridget sites in the diocese of Carlisle.

St. Columba appears twice in that diocese as patron, at Warcop church and at the ancient and long extinct chapel of Casterton. Warcop, at the dawn of medieval county history, was owned by a Norse-named family, and a branch of the same family owned Casterton. The old road over Stainmoor passes Warcop ; it was the Viking highway between York and the West, and probably the 'Steinmor' where king Eric Bloodaxe was killed in battle about 954. Another dedication to St. Columba occurs further along this road at Topcliffe in Yorkshire, and there we find a late pre-Norman cross. With these hints before us we can hardly believe that the name of the saint came into Northumbria as a result of his actual presence, which any reader of his life knows to be out of the question. As a Norse importation, we have the example of Örlyg to quote.

To these instances we might add the site, as old as Domesday Book, of Kirksanton in south Cumberland, matching Kirksantan in the Isle of Man, and referred similarly to a St. Sanctan. There are other churches that might be attributed to Viking age foundation by Norse settlers, but these with Gaelic names put this matter to the test, because south of the Solway Gaelic has never been spoken and is found in

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place-names only where a Celto-Viking origin is probable. That the dedications are as old as the churches cannot be proved, but most of them are known from early medieval times; and though post-Conquest dedicators sometimes had an antiquarian turn (as when a bishop revived the cult of St. Herbert of Derwentwater, basing upon the notice in Bede) there was no reason for ecclesiastics of the Roman church to commemorate saints of the Gael with whom they had nothing in common.

The contention proposed in this article, then, is that Viking settlers were very largely, if imperfectly, christianized in the ninth century, long before the general conversion of Scandinavia; and that in one or two generations more their descendants, in settling parts of northern England, became the founders of churches which have endured until our day.

“L’Affaire Glozel”

by O. G. S. CRAWFORD

ON 27 September 1926 the learned world was startled by a letter from Monsieur Salomon Reinach, published in *The Times*. The writer expressed the opinion that the Palaeolithic period (the last phase of which is represented in France by La Madelaine) might have lasted up to 5000 B.C. M. Reinach is Director of the National Museum of Saint-Germain-en-Laye, near Paris; his reputation as a savant stands very high, and he is listened to with respect. The discoveries which prompted him to express this unorthodox opinion were, he says “ascertained last summer at Glozel near Vichy. In the same stratum, no doubt a deposit of a religious character, have been found—(1) objects akin to the Neolithic culture of the Aegean, one of them being an idol in the shape of a violin; (2) inscriptions closely related to those found in 1894 in an early Portuguese dolmen; (3) numerous engravings of animals on pebbles, the style of which is degenerate Magdalenian. As the objects classified under (1) and (2) date from about 4000–3500, degenerate Magdalenian outlines (3) cannot possibly be earlier, and we thus have a proof, which I think is conclusive, that the Magdalenian should be dated about 5000 B.C.” Thus from the outset the discussion of the issues has been confused by questionable fact and faulty inference.

The most surprising objects from Glozel are the inscribed clay tablets. If genuine, and if they belonged to any of the various remote pre-Roman periods claimed for them, they would revolutionize our conception of those periods. I determined therefore to go and see them for myself. I inspected the site of their discovery under the guidance of M. Emile Fradin, who, it may be noted, was a boy at the time of their first discovery in 1924. I was shown his own collection at the farm, and later visited Dr Morlet at Vichy and saw the remainder of the objects. I came to the conclusion that the majority of the objects were quite certainly forgeries. That being, in my opinion, so, it becomes unnecessary to waste time discussing the remainder, whose character was not so immediately apparent. These

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other objects might or might not be genuine, but the point is not worth discussion; for when once a site has been salted, any objects previously found there cease to have any scientific value.

The clay tablets resemble dog-biscuits. They may be divided into two classes—the rough and the smooth. The rough tablets are made of clay mixed with a good deal of grit; the smooth ones are made of clay unmixed with grit and are apparently harder. It was stated by Dr Morlet (in conversation with me) that this difference was due to the smooth tablets having been washed by the finders; but no amount of washing can turn a tablet of gritty clay into a smooth one. The smooth tablets are the best in every way; the writing on them is clearer than on the others; there are more perfectly formed signs; and some of the tablets are of great size. None of the smooth tablets are, if I remember right, fragmentary. The same difference of texture is observable in the other clay objects—the pots and phallic objects, for example. As many as fifty had been found up to the time of my visit.

A large, well-preserved, inscribed clay tablet of the smooth kind was pointed out to me by M. Fradin. There is a jagged hole through the middle of it, yet the tablet is not cracked. Through this hole passes a root about as thick as one's little finger. (This is the one which attracted M. Reinach's attention, as no doubt was intended). Now the hole must, by hypothesis, have been there before the tablet was discovered. How was it made? I can think of no reasonable explanation, for any natural force, exerted strongly enough to pierce a buried tablet of baked clay more than an inch in thickness, must most certainly have fractured it; and the ragged edges of the hole exclude the possibility of long-continued friction. On the other hand, the device is just such as a clumsy forger would adopt to bolster up his case.

The pots are extraordinarily thick-sided, and the bases are solid; in fact the so-called pots are really no more than lumps of clay with a hollow in the upper part. They are unlike any pottery, prehistoric or other, that I am acquainted with, except that of the mud-pie variety made by children.

The so-called flint arrow head (III, fig. 2, centre)* is a natural shape, slightly improved to make it more convincing. Dr Morlet has stated (III, p. 8) in words emphasized by special type—that not one of the flints has been polished (“aucun silex n'est poli”). That is incorrect.

* See Bibliography, p. 188.

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Amongst the flint débris—one cannot call it more—amassed by M. Fradin, I observed several tiny fragments of polished flint. It was gratifying to me to find that neither had escaped the lynx-eyed Professor Breuil, whose description of the flints is illuminating. “ L’examen des silex recueillis temoigne de leur faible nombre, et, bien qu’ils soient éclatés par l’homme, d’un état si fragmentaire et esquillé, que la plupart ne sont que des débris sans importance morphologique. Plusieurs sont cependant faiblement retouchés, mais aussi atypiques. . . . Il n’y a ni grattoir, ni burin, ni morceau de lame bien venue, ni aucun type. Rien absolument ne rappelle le Paléolithique, ni l’Azilien, ni le Tardenoisien, ni notre Néolithique normal. . . . En revanche, j’ai observé qu’ environ un tiers des petits fragments de silex sont des menues parcelles de haches polies en silex, bien que, jusqu’à présent, aucun autre fragment plus important ou hache complète de cette nature n’ait été rencontré ” (*L’Anthr.* xxxvi, 546, 547). Against M. Breuil’s verdict it is instructive to set Dr Morlet’s conclusion (III, p. 9) : that the flint industry is a direct inheritance from the industry of La Madelaine (“ il est à noter que leur industrie du silex est un héritage direct de l’industrie Magdalénienne ”).

Harpoons were found, and three were claimed by Dr Morlet to be of stag’s horn and of Magdalenian type. Two of them had ‘ letters ’ engraved on them. But they are not of stag’s horn at all, but of bone, and fresh ‘ green ’ bone at that ! No trace of stag’s horn, or of objects made from it, has been found at Glozel. (Stag’s horn is not easy to obtain nowadays on a farm). And as for the Magdalenian character of the workmanship— in the opinion of Professor Breuil, the technique of the bone workmanship has no connexion with that of palaeolithic sites (actual or derived), where the graver was the implement used for cutting this material. (“ La technique du travaille de l’os n’a aucun rapport avec celle des milieux paléolithiques ou dérivés, où le burin était l’instrument usité dans le débitage de cette matière,” *L’Anthr.* xxxvi, 548). According to the same writer the material used was the cannon-bone of a large animal (ox or horse ?) which had been laboriously carved with a knife and then rasped, the points of the barbs being however left blunt ! He concludes by stating that he does not know of any harpoon of any age which has been so badly made. (“ Je ne connais actuellement aucun harpon d’aucun âge qui soit aussi mal réussi ”).

The thing, indeed, is an obvious forgery, and it struck me as such the moment I saw it and before I knew of M. Breuil’s opinion.

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It is also obvious that it is made of bone, and one is at a loss to understand how Dr Morlet could have failed to recognize this most patent fact: for the bone is smooth, white and hard.

The presence of these ugly but well-conditioned bone harpoons needs explaining for another reason. In his first pamphlet Dr Morlet argued that the trench where the original discoveries were made was a grave (I, fig. 1, opp. p. 10), and that the bones it contained had been destroyed by humic acids dissolved in rain-water. ("L'absence d'ossements s'explique par. . . la facilité avec laquelle les eaux pluviales arrivent à dissoudre les matières osseuses"). Such action undoubtedly does take place and there are good reasons for supposing the site in question to be favourable for it. Dr Morlet refers to the subject again later but meanwhile (presumably, for no dates of discovery are given) the bone harpoons and a few other bone objects had turned up, all in splendid preservation! So we are told that it is very probably due to the combined action of the chemical agents described that we find at Glozel only *rare remains of bones* ("que de rares débris d'ossements"). Chemical action might well explain the *absence* of bone but how can it possibly explain its *rarity*? And the rare specimens are themselves in perfect condition!

There are a number of objects of slate and other easily worked stones; they include a harpoon and a barbed "arrowhead"—a palpable forgery,—and pebbles from a river-bed with ground edges, obvious imitations of axes. (I have made such "axes" myself from the same materials and nothing is easier). Several of these objects have "letters" engraved upon them. All are of course "votive." None are serviceable, though some are less clumsily made than the bone harpoons and the flint "arrowhead." But slate is easier to work than flint; it is a material that has always been beloved of the forger. Hence we get good objects of slate but very poor flint ones—indeed the "arrowhead" is the only flint object that might be called an implement or weapon.

I was shown some animal teeth, sharpened to a fine and delicate needle-point, the socket-end being left thick and unworked. I have seen nothing like them elsewhere. They are the only objects which did not necessarily appear to be "votive," but in such bad company they need all the more explanation for that!

In addition to all these spurious finds there are some which are genuine antiquities though not prehistoric. I refer to the débris of a glass factory. The remains consist of many glass 'drops'; fragments

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of glass vessels with very thin sides ; pieces of large vessels made of hard light-grey vitreous paste (not sandstone, as M. Reinach states, p. 2) ; and possible remains of a kiln. The sides of the vessels are an inch in thickness, and the whole of the base of one has been found, containing a thick layer of glass. This had been poured into it in a molten state. Many fragments of these thick-sided vitreous pots are to be found lying about upon the site. I brought away some that I picked up myself. Dr Morlet declared in his first brochure that this glass-factory was Neolithic, and claimed it as providing evidence that glass was known during the Neolithic period in Central Europe. (“ Les découvertes de la station de Ferrières (*i.e.* Glozel) apportent, semble-t-il, une nouvelle preuve que le verre existait dès le néolithique dans l'Europe occidentale,” I, p. 42). Even so recently as in the third brochure, Dr Morlet claimed that the site was homogeneous. (“ Nous avons toujours insisté sur le fait que la station de Glozel ne présente qu'une seule couche archéologique, sans distinction stratigraphique possible. Les divers objets que nous recueillons se trouvent aussi bien au fond qu'à la surface de la couche fertile, qui a, en moyenne, une épaisseur de trente centimètres environ. Toutes nos trouvailles sont mélangées les unes avec les autres. . . .” III, p. 47). Now, however, it is claimed that this glass débris is only found on the surface. Dr Morlet himself stated this to me in conversation, and M. Reinach seems to confirm it by his remarks on p. 2 of the *Antiquaries' Journal*.

The original “ trench ” however, the starting-point of all the discoveries, contained vitrified bricks, of the same shape and size as the inscribed tablets ; indeed, “ une véritable couche de verre s'était formée sous l'action du feu.” I was shown a fragment of an inscribed brick tablet which was said to have been found in the trench. It is thus quite impossible to dissociate the glass factory from the inscriptions. M. Reinach, however, cannot accept this conclusion ; degenerate Magdalenians might be able to write, but they could hardly run a glass-factory ! Describing the discovery of this “ trench ” M. Reinach says : “ Meanwhile Fradin pursued his work and found an oval building the soil of which was paved with bricks, *one bearing an inscription* (*italics ours*). The inner walls of that small structure were entirely vitrified by fire. It may have been a (medieval ?) kiln, but that is now difficult to decide, because the visitors almost destroyed the walls before they had been examined by a competent person. As no bones were discovered, it cannot be considered as a tomb ” (*Ant. Journ.* VII, Jan, 1927, p. 1). Does M. Reinach really ask us to believe that

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these fragile brick tablets, which have to be worked delicately out of the soil with a penknife, were used in the Middle Ages to pave the floor of a kiln?—that they would have been suitable for this purpose after lying (*ex hypothesi*) for about 4000 years in the soil?—or that even granting all these absurdities, the inscription on one of them would have survived to the present day? He admits that one of the “inscribed” tablets was used to pave the floor of a (medieval?) glass factory, but asks us to regard the inscription as Neolithic! And Dr Morlet, the excavator, tells us that he has always insisted that all the finds belong to one deposit,—and are therefore contemporary.

Finally, there are the engravings of animals. None of these represent extinct species; but some represent species that have not yet evolved, such as the dog-headed goat and the kangaroo-tailed deer, or which have never set foot in France, such as the buffalo. Professor Breuil remarks again and again that there is nothing Magdalenian about the engravings; and there is no greater authority on the period and its art (so much of which he has discovered himself). For me the engravings are the work of the man who laboriously carved the bone harpoon and who added the “letters” to it and the slate objects.

We see then upon what ground is based M. Reinach’s “conclusive proof” that the “true Magdalenian should be dated about 5000 B.C.”! Not a single trace of Magdalenian workmanship or even influence can be found by Professor Breuil, whose opinion is humbly shared by the present writer. But, it may be said, even granted this, the objects must be genuine since they are vouched for by eminent authorities who have actually dug on the site at spots selected by themselves and found objects. I will examine an instance of such a test excavation; but before so doing I must explain the existing conditions there. The site lies at the foot of a steep slope. The area dug over up to the present is quite small. Digging has been carried out there at many different points and upon no system. So far as I am aware, no plans or sections have been made—no records kept of the date of the discovery of the objects nor their depth—at any rate this information has not been methodically tabulated and published. The soil excavated has been piled up by the side of the holes made. The consequent chaos may easily be pictured by any scientific excavator. The excavations have been carried out not by workmen but by Dr Morlet and M. Fradin working with their own hands. As a reason for this procedure, and what appears to be the haphazard selection of points to dig, Dr. Morlet

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alleges the necessity of preserving “ islands ” of virgin soil where sceptics may resolve their doubts.

On the great day when M. Reinach himself visited Glozel, numerous objects were found with remarkable ease and rapidity—by digging at a point selected by M. Seymour de Ricci and approved by M. Reinach ; but M. Reinach is not content, “ C’est une tablette à inscriptions que je voudrais bien voir trouver ! ” Now note very carefully the procedure adopted. (Dr Morlet is speaking). “ Je demande à M. Emile Fradin où il a recueilli celle qui est en train de sécher. ‘ Car il y a généralement plusieurs ensemble ’ dis-je à M. Reinach. On abat, sur un côté du trou indiqué, une portion de terre végétale, recouverte d’herbes. J’explore au-dessous la couche archéologique. Tout à coup, une parcelle de terre à brique de couleur rouge est enlevée par la pointe du couteau. Sans savoir encore s’il s’agit d’une tablette, d’une poterie ou d’une idole, je dégage avec précaution l’argile environnante où se voient de nombreuses racines. Bientôt je recueille sous les yeux de M. Reinach et de M. de Ricci une tablette assez malléable, non revêtue de ‘ bouillie d’argile. ’ La terre de la couche archéologique qui adhère à ses parois laisse entrevoir plusieurs signes alphabétiques. ” (*Mercur de France*, 1 November 1926, p. 14).

M. Fradin points to the spot ; Dr Morlet digs ; and M. Reinach is convinced ! Such was the actuality that lay behind the “ memorable days ” when “ scientific control of the excavations ” at Glozel was exercised. “ On my return,” says M. Reinach, “ I immediately declared to the Academy that all the finds (as partly photographed in three brochures issued by Dr Morlet) were undoubtedly genuine and neolithic. ” But we search in vain for any tangible evidence of neolithic date ; and indeed we note a certain hesitation in M. Reinach himself. For in his letter to *The Times* he assigns the objects found at Glozel to 4000–3500 B.C., whereas in the *Antiquaries’ Journal* this date is lowered to 3500–3000 ! The one thing he is quite consistently dogmatic about is the Magdalenian character of the engravings—“ decadent, but incontrovertible ”—and this opinion is repudiated by the greatest authority on palaeolithic art, M. Breuil.

We conclude by repeating our opinion that the inscriptions, the engravings and the majority of the other finds are forgeries ; and that those who believe in their authenticity have been the victims of a hoax.

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Those who like a little quiet harmless fun should read Dr Morlet's "Lettre ouverte à M. O. G. S. Crawford" in the *Mercure de France*, 1 May, 1927.



THE PEUTINGER TABLE SHEWING SURVIVING BRITISH PORTION

Ancient Writers on Britain

by C. G. STEVENS, B.A.

THERE is a tendency, in these days of steadily increasing enthusiasm for excavation, to overlook the very considerable body of Greek and Roman literature extant which deals with the geography and history of the British Isles during the Roman occupation (43-410 A.D.) Few people have studied all the evidence ; few history books pause to discuss the authorities for such familiar stories as those of Caratacus and Boudicca, or even to spell their names correctly. The reason is that many of these documents have never been edited in England, and no attempt has been made to collect them in handy form, and discuss the date, purpose, and value of each. The purpose of this article is to review the most important authors and estimate briefly the value of the contribution of each. There are no fewer than 49 writers in Greek and 79 in Latin who make direct mention of the British Isles ; and though it is true that many of these do little more than mention them, or repeat the statements of previous authorities, we are still left with a number of independent sources of information.

The earliest geographers knew of no islands in the Ocean Stream, which they believed to encircle the earth ; and although Herodotus, the first Greek historian (about 445 B.C.) had heard of the tin of the Cassiterides Islands, he was too cautious to admit that they existed. But when Pytheas, the famous Greek explorer of Marseilles, made his two voyages in the middle of the 4th century B.C., the existence of the " Bretanic Islands Albion and Ierne " (as Aristotle calls them) was established beyond doubt. They had already been fully discussed in connexion with the tin trade by previous authors when Polybius wrote in 260 B.C. It was this trade which first brought Britain to the notice of ancient writers ; and ten years after the expeditions of Julius Caesar (55-4 B.C.), Diodorus Siculus is able to describe in some detail the route by which ingots of tin were conveyed in wagons at low tide from the mainland of Britain to Ictis (St. Michael's Mount), and from thence to the mouth of the Rhone. He is the first author to distinguish between the Cassiterides, which lie off the Galician coast of Spain, and the Bretanic Isles, and the first to note the triangularity of Britain.

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Scientific geography begins with Strabo (about 30 B.C.), who criticizes the position assigned by Pytheas to Britain, and his claim to have set foot in it. Ireland now first attracts attention, and Strabo speaks of "those who have seen the Bretanic Ierne." The next century saw the gradual infiltration of Roman goods and manners, and the decisive step taken by Claudius in 43 A.D. when the island was annexed and permanently garrisoned ; and with the advance of Roman arms geographical knowledge improved. Pliny the elder, writing about 70 A.D., knew of the Caledonian forest, which, he says, marked the limit of the first 30 years of Roman advance ; and Solinus, writing a little later, is so impressed with the size of Britain that he calls it " a second world." Shortly afterwards the great historian Tacitus wrote the life of his father-in-law, Agricola, who was Governor during the advance into Scotland (78-84) : but, in spite of this splendid chance of first-hand evidence, Tacitus prefers to sacrifice geographical accuracy to literary effect, contributes nine names only, and has absolutely no grasp of the geography.

With Ptolemy (about 120) we first get a serious attempt at accurate mapping by means of latitudes and longitudes, though he himself admits that his system is based on the previous work of Marinus, now lost. Ptolemy's maps are also lost, but his index of latitudes and longitudes survives. What he calls his " first table of Europe " includes Alvion, Ivernia, Thule and the other islands ; Ireland is taken first and the capes, rivers, tribes and towns given in order, and a similar account of Britain follows. At first sight the information seems to be derived entirely from coastal traders, as names like " High Cliffs " and " New Haven " suggest, but a knowledge of the interior also is shown in the accurate plotting of the positions of some of the inland tribes and towns. For many years Ptolemy was the sole text-book, and geography consisted in criticism of him : but his work is not free from errors, the most noteworthy of which is in making Scotland run due east from Northumberland.

After Ptolemy accurate mapping became the fashion, and before long road books were unofficially published for the benefit of travellers. There are two of these Itineraries extant, the earlier of which, entitled the " Itinerary of Antoninus Augustus," extends over the whole Roman Empire. It has been thought, since no places on the turf wall of Antoninus in Scotland are mentioned, that the document should be dated between 138, the year of his accession, and 142-3—the building of the wall. But the routes and stopping places are selected on no

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apparent scheme and the Scottish wall may well have existed at the time of preparing the itinerary. A more suitable date is 208, the date of the arrival in Britain of Caracalla, who also styled himself Antoninus, on a visit to his father Septimius Severus, who died at York three years later. Caracalla was a great traveller, and it has been suggested that this book may be a guide compiled under his auspices from the collected information of officials up and down the provinces. But the appearance of a Diocletianopolis and a Maximianopolis elsewhere in the Itineraries, and the tendency to keep inside a frontier of the time of Diocletian and not of Caracalla, seem fatal to this view : while the frequent repetitions, and the absence of some of the most important roads of Italy and the provinces, make it fairly clear that this cannot be an official document. The fifteen journeys in Britain are in no intelligible order, and by no means all of the 111 stations are important settlements : one is a farm in Suffolk, another an unknown inn between Salisbury and Silchester ; the journey from Richborough into Scotland turns aside to Noviomagus, which must be on a by-road, and goes through Chester and York instead of through Lincoln ; another goes from London to Carlisle through Norwich, Lincoln and York ; an important first century road, the Fosse Way, is scarcely used at all. Additional difficulties are caused by the uncertainty of the figures representing the distances from place to place, and by the emendations of successive editors.

The second road-book survives in map form and is called the "Table of Peutinger" (plate). It is drawn on a roll 11 feet long, of vellum sheets joined together, and takes in the whole of the known world. It is believed to be a 13th century copy of a 4th century original. Most unfortunately for us, the last sheet, which contained the title and most of Britain, has been torn off and we are left with only the east coast line between Norwich and Lympne, and the south coast line between Lympne and Exeter, which is far too short and contains only one other name ; of the 16 place-names which survive, 10 can be identified, and 6 are conventionally labelled as towns with double towers. The roads are drawn diagrammatically but the distances are filled in fairly accurately. The roads used are the Kentish section of the Watling Street of Antonine's second, third and fourth journeys, with that curious détour to Noviomagus of the second journey, and the Suffolk and Norfolk road of the ninth and twelfth journeys. But the details are not identical and the Peutinger map cannot be regarded as an illustrated edition of the Antonine Itineraries. Curiously enough most of the important 4th century forts on the "Saxon Shore" between Yarmouth

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and Porchester are omitted, and two by-roads are included which are not otherwise known and cannot be identified.

These two road-books do not attempt to give the shortest routes from place to place, nor to enumerate all the important towns, but record the information of travellers who visited villages as well as towns, and used the byway as often as the high road.

A record of the military geography of the Island is preserved in the illustrated register of the provinces called the "*Notitia Dignitatum*," which gives the rank, insignia, and personal staff of the officials in each. This document appears to have been compiled at the head offices in Rome and Constantinople in or about 426; to have been constantly used for reference, and to have been annotated and corrected in the Roman office during the next ten years. But it seems likely that much of the material dates from at least the end of the preceding century, and that the state of affairs in Britain is that of about 400 A.D. The Island is under a civil governor or vicar, and the five provinces of Britain, here named for the first time, have each a governor; and there are still Roman troops in garrison. These are of two kinds—a mobile field force under the "*Count of the Britains*," and two frontier garrisons, one under the "*Duke of the Britains*" along the line of Hadrian's Wall and scattered at important points below it (36 places are named in all and 12 of these are identified as Wall forts); the other, under the "*Count of the Saxon Shore*," is in garrison at nine forts between The Wash and Porchester to resist Saxon attack. The garrisons, with the exceptions of Legion VI at York and Legion II at Richborough, are all auxiliary units.

There are other points of interest in this register. British units are found serving as far afield as Illyricum, Thebais, Gaul, and Spain. There is a keeper of sacred treasures at London (called Augusta), and a keeper of a depot for weaving imperial garments at Winchester. The state of affairs in Britain as mirrored in the *Notitia* may have lasted as late as 410 but certainly not later, and though the actual submission to the Saxons is dated as late as 442 by the chronicle of Prosper Tiro, the lives of St. Patrick and St. Germanus preserve traces of earlier Saxon raids.

With one exception there are no contributions to our geographical knowledge of Britain during the Dark Ages: this exception is the work of "*the Anonymous Geographer of Ravenna*," compiled in Italy in the 6th century by a person who preferred to be nameless. It is little more than a list of names, some Roman in form, some native, of places

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and rivers throughout the world. The first 34 of the 278 names belong to south-western England, the geographer having last dealt with the north-west of Gaul. A few names are next given in the Marlborough-Winchester district, and a group follows in south Wales around Caerleon and Gloucester. After a small group in Kent and Sussex the geographer returns to the Welsh border, proceeds through central England to the Wall, along the Wall itself, above it and along the Wall of Pius, and finally into northern Scotland. Scarcely more than a hundred names in this long list are otherwise known, and the absence of distances and explanatory notes, the corruptness of the text, and the uncouth Latinity of the continuous passages, make certainty impossible; and the list is only useful as furnishing corroborative evidence for place-names already known. But it is the only list which preserves the names of the forts on both walls in order, the rivers of England, and the islands round it, and which adds the tribal names of some cantonal towns such as *Isca Dumnoniorum*, and *Noviomagus Regentium*.

Some notes must be added on the chief authorities for the history of the island.

Caesar, of course, gives us a full account of his two British expeditions, and we also possess some of the writings of contemporary critics upon them, but little is known of the period between 54 B.C. and 43 A.D. Strabo, indeed, mentions that the island paid import dues instead of tribute, and Tacitus has heard of inter-tribal wars, but Roman writers knew no details, and the doubtful evidence of coins is our only guide. The scheme of conquest was not abandoned for long. Augustus actually contemplated invasion three times, as Dio Cassius and Strabo tell us; Caligula got as far as Boulogne beach; and British princes sought the protection of Rome more than once. Unfortunately Tacitus' account of the Claudian invasion in 43 is lost, and we have to fall back on Dio's story, supplemented by the notes of Suetonius, Eutropius and Orosius: but the critical period between 50 and 85 is fully dealt with by Tacitus.

After 85, however, archaeology to a large extent takes the place of history; relevant passages become rare and not always trustworthy. The date and purpose of the Wall is the first big problem. Spartian assigns its building to Hadrian, before and during whose reign the tribes of southern Scotland and the Brigantes of northern England (according to Juvenal and Pausanias) had been giving trouble. The later wall of turf in Scotland is assigned by Spartian to Antoninus Pius, and archaeology

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supports both these dates. But literature gives us no further help until Dio and Spartian record the disturbances in the reign of Commodus (180-192), which resulted in a deputation to Rome from the army of Britain. In the next century the activities and death of Septimius Severus in Britain (211) are related by Dio and Herodian, and a number of inferior authors assign to him the building of a wall. But literature is silent until the last quarter of the 3rd century, during which the revolts under Probus are recorded by Zosimus, and the story of Carausius and Allectus by Eutropius and the Panegyrists. There is a slight improvement at the beginning of the 4th century, when the Picti appear for the first time in the Panegyrists, and Eusebius, Ammianus Marcellinus, and Libanius record the defeats of the Scots by Constantine I and Constans Augustus. There are two good sources for the latter half of this century in the Panegyrists and Ammianus : of these the former mention Theodosius' naval victories over the Saxons, the "reduction of the Scotti in their marshes," the prosperity of Britain, its corn, wine and wool, its temperate climate, and the absence of dangerous wild animals. Ammianus is also full of information. He gives the names of the invaders as Attacotti, Scotti, and two Pictish tribes, the Dicalydones and Verturiones ; he tells of the downfall of a "Count of the maritime tract" and a "Duke" ; he mentions corn, and pearl fisheries ; and he is the authority for the alternative name of London, Augusta. The authority for the revolution of Maximus during the reign of Gratian (377-83) is Zosimus, and for the state of misery which succeeded it, Libanius. Claudian refers to the recovery under the direction of Stilicho at the end of the century, and Zosimus and Prosper Tiro record the usurpation of Constantine in 407, after which date Britain was left to look after itself.

The final catastrophe is shrouded in obscurity, and of our two main authorities for the events between 420 and 449—Gildas and Bede—one is most unreliable and the other wrote 200 years after they took place. Gildas was a Welsh monk whose object was not to write history, but to deprecate the disturbances of the 6th century, in which he lived. Bede was a careful archaeologist and a historian of the first rank, but his historical sources were inadequate, and he lived too long after the "hiatus" to possess first-hand knowledge of it. The stories of the "groans of the Britons" and the three appeals to Rome should, therefore, not be taken too literally, and in default of reliable literary evidence we have to turn to archaeology for our knowledge of these troubled years.

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BIBLIOGRAPHICAL NOTE

English editions and texts of the documents relating to Roman Britain are conspicuously scarce, and only one attempt has been made to collect all the relevant passages and print a complete text of them with variant readings. This was in the *Monumenta Historica Britannica*, vol. 1, which has long been out of print: it is still obtainable from second-hand booksellers, but it is high time that its place was taken by a handier and more fully annotated book.

There are three good manuscripts of Antonine—D (10th cent.), at Paris (7230, A) P (8th cent.) Madrid (2 R, 18); and L (8th cent.) Vienna (181). It was first printed by Stephanus (Paris, 1512) and then by Aldus (Venice, 1518), and at intervals of about 25 years during the next two centuries. The British section was annotated by Talbot and investigated by Camden (1586), who frequently refers to it, and published by W. Burton (1658) and in Thomas Hearne's edition of Leland's *Itineraries* (1712). The fullest commentary of this period is Thomas Gale's, published by his son Roger in 1709, which includes many identifications of place-names and emendations of distance figures. Horsley's *Britannia Romana* (1732) made further changes and Luckombe's *England's Gazetteer* (1790) and Reynolds' edition (1799) introduced others.

These commentators had strayed so far from the original that Wesseling's collation of the MSS (1735) was the only reliable text until the middle of the last century, when Parthey and Pinder printed an accurate text of the whole document at Berlin (1848). This unfortunately has long been out of print, but the British section is reprinted and thoroughly dealt with in T. Codrington's *Roman Roads in Britain* (3rd ed. 1918). A careful study of Itinera v and ix may be found in *Journal of Roman Studies*, xiv (1924).

The only extant copy of Peutinger's Map is in the Imperial Library, Vienna. It was discovered by a Viennese scholar, Conrad Celtes, in 1507, and bequeathed to Conrad Peutinger. The best facsimiles and editions are in French: Desjardins (Paris, 1869), Rudens (Brussels, 1884), and Camille Julian *Géographie de la Gaule*, vol. 1. Miller's edition (Stuttgart, 1916) has a useful black and white reproduction of the whole map. The British section is figured in *Monumenta Historica Britannica*, and in Elton's *Origins of English History*, 1870. The only photographic reproduction appeared in the *Illustrated London News*, 29 November 1924 with an article, which should be read with *J.R.S.* xiv (see above), where part of it is reproduced again.

There are four MSS. of the Notitia: P at Paris (9661), parts of which were reproduced in Paris in 1921; V at Vienna (3103); C at Oxford (lat.misc.378); all of the 15th century; and one of the 16th century at Munich (10291), called M. C is the best, and can be seen in the show case at the Bodleian. The Notitia was printed at Basle (1552), Paris (1651), Venice (1729), and by Bocking at Bonn (1839). The standard text is Seeck's (Berlin, 1876), which is still obtainable. Seeck reproduces the illustrations in the text in black and white, and those of the British section are reproduced in colour in *The Saxon Shore* by Miss Mothersole (1924), who in this book and the *Roman Wall* (1922) gives a good popular account of the document, and prints the text. American editions of the British section are Fairley's *Sources of English History* vi, 4 (1899), and Merrill (1908). With the Notitia should be studied the cup found in Rudge Coppice, Wilts., which is inscribed with five place-names in northern England in no intelligible order. It is recorded in the *Corpus Inscriptionum Latinarum* (vii, 1291) and figured in Horsley's *Britannia Romana*. The whole problem of the Notitia has been discussed in *J.R.S.* by Bury (vol. x), and R. G. Collingwood (vol. xii).

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There are three manuscripts of Ravennas : 13th century MSS. at Paris (4974) and Rome (Urb. 961), and a 14th century MS. at Basle (F.V. 6). Porcheron edited the Paris MS. in 1688, and it was re-edited at Leyden in 1696 and 1722. The three MSS. were collated by Parthey and Pinder (Berlin 1860). The British section has only been printed twice in England; by Roger Gale (1709), who made a number of rather wild identifications and in *Monumenta Historica Britannica*, with variant readings. Modern writers tend to ignore Ravennas, but notes have been written on him in Haverfield and Macdonald's *Roman Occupation of Britain*, p. 191, Macdonald's *Roman Wall in Scotland*, and J. G. C. Anderson's abridged edition of Furneaux's *Agricola*. Haverfield also has an interesting essay on p. 289 ff. on the 'xxviii Civitates of Britain.' This and the career of Charles Bertram (pp. 77 ff.) should be read by all who study the Roman place-names of Britain.

Little has been done in the past hundred years towards the critical elucidation of Ptolemy's text. There is the standard work of Carl Müller, never unfortunately completed (vol. I, part 1, 1883; part 2, 1901); but this seems to be all of any importance, apart from studies of very limited sections. The notes give variant MS. readings, but they are in Latin, and the topographical identifications suggested or quoted are often groundless. Other editions are those of Nobbe (Leipzig, 1898, three small volumes, still in print); and Wilberg (Books i-vi only; Essen, 1838-45).

Amongst works which deal with special sections of Ptolemy are the following :—
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PLATE I



WALLS IN BASALT COUNTRY

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facing p. 197

The 'Works of the Old Men' in Arabia

by FLIGHT-LIEUTENANT MAITLAND, Royal Air Force

THE walls and hut circles which are known to the Bedouins as "the works of the old men" lie about 120 miles to the east of the Dead Sea, in a southern extension of the Jebel Druze range through which the Cairo-Baghdad air mail passes, in the neighbourhood of landing grounds F, G, and H.

The Jebel Druze is a desolate range of mountains rising to from 2000 to 3000 feet above sea level. It consists of steep-sided flat-topped mountains of black basalt, the wadis and flat country between being covered with sand thickly besprinkled with huge black basalt boulders. Here and there the winter rains have formed lakes of sand which during the winter are morasses and during the summer hard flat glaring expanses of white sand, many as much as three miles long.

The valleys support a sparse growth of tough and gnarled camel-thorn and scrub ; sufficient grazing for camels but for little else. Except for short spells during the winter, when there are occasional heavy downpours of rain, the nearest water is now at Kasr Azrak, some fifty miles to the westward towards Amman.

A better idea of the country will perhaps be obtained if it is described as seen from the point of view of the air passenger leaving Ziza for Baghdad. On leaving Ziza the country is rolling downlands rising to the east, to the Jebel Mughher. Traces of irrigation can plainly be seen below with many a ruin of ancient town and city, a sign of peaceful days long since past. In clusters over the downs are the grazing flocks of sheep, goats and camels of the Bedouin, with here and there a group of their black tents.

As Ziza is left behind, signs of irrigation cease, the country becomes more rugged, and black boulders and reddish earth gradually predominate. This is the ancient frontier of the desert ; and Kasr Kharana, Kasr Amra and Kasr Azrak shew that the raiding Bedouin was as real a menace to the Romans and Byzantines as they are to the cultivator to-day. Kasr Azrak lies in a valley into which converge the winter rains of the mountains to the East ; so it possesses pools of

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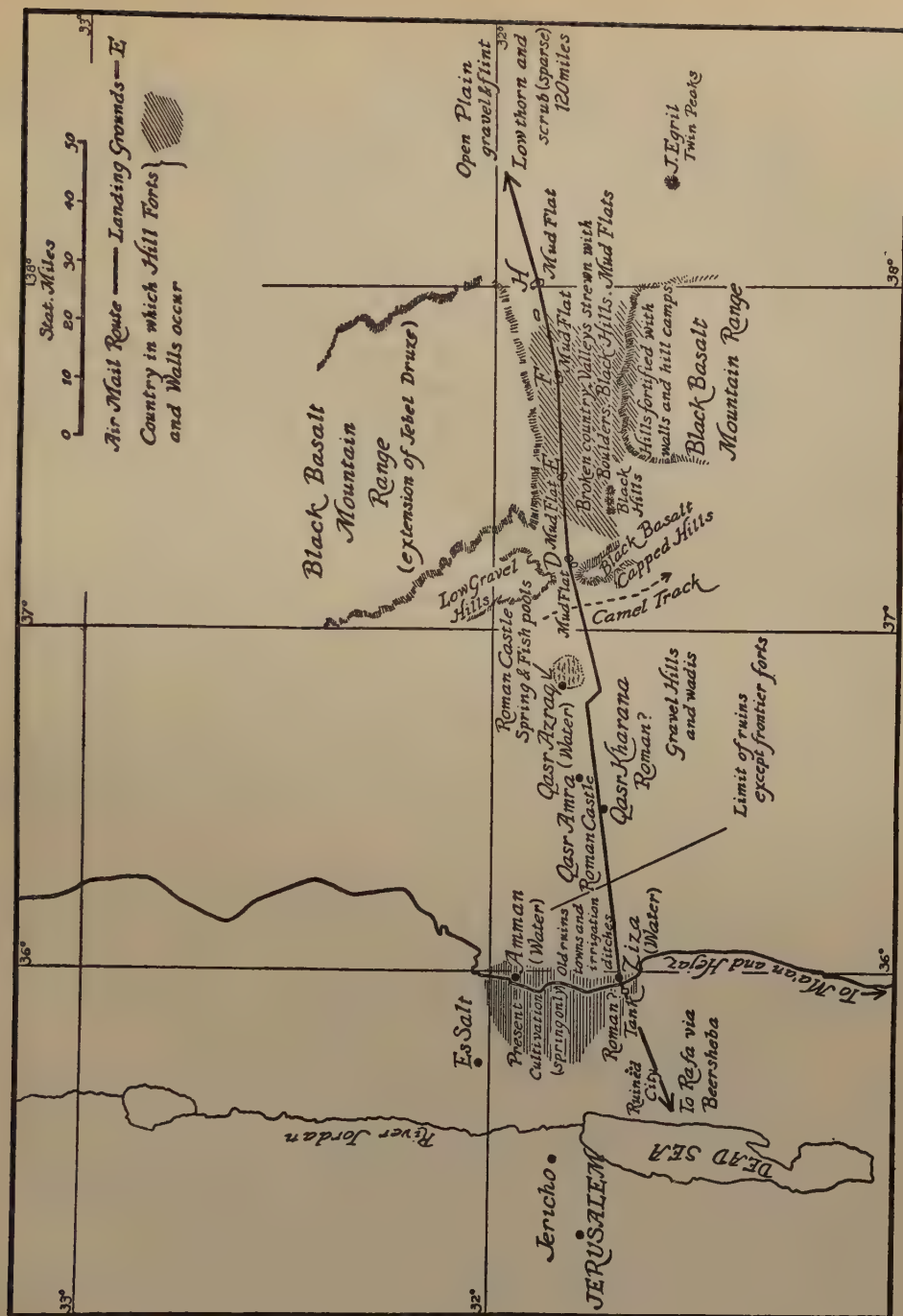
clear water throughout the year, and marshes in which wild boar, and duck and geese in season, are plentiful. This is the last water which is obtainable until the wells of El Jid and Rutbah are reached in Iraq, 230 miles to the eastward. A little to the eastward of the glittering dried salt flats of Azrak a number of winding tracks can be seen running across the route roughly north-west to south-east. This is the camel route down the Wadi Sirhan to central Arabia, from the Hauran to El Jauf, Hail and finally Er Riadh of Ibn Saud of the Wahabis. It is to this ancient route that Kasr Azrak owed much of its importance, and for that matter still does ; to the Bedouin Azrak, the Blue Castle is a meeting place of considerable importance—by day only be it understood. After dusk the Bedouin has far too great a respect for the Afrits of the old Roumi cohorts, which frequent the strongholds which they once held, ever to wish to spend a night near Kasr Azrak or Kharana.

Ibn Saud's men bent on laying desolate all that is not Wahabi, parties of adventurous Bedouin out to lift a few camels from the Beni Sukhr, Turkish officers on their way down to the Hedjaz, the Beni Sukhr on their seasonal move for grazing, and now and then an aeroplane with a defective engine or armoured car on desert reconnaissance or shooting party out for duck—all are attracted by the water of Azrak and nearly all hope not to meet their fellow guests.

However, we will hope that our engines do not give trouble and that we do not have to taste the waters of Azrak and be tasted by their equally famous mosquitos.

Shortly after leaving Azrak, the country becomes rugged and desolate ; black boulders everywhere glisten against the white sand or reddish grey earth ; and little conical flat-topped hills are seen on either side, whilst ahead occasional " mud " flats can be seen gleaming amongst the darker mountains.

As the mountains are approached, the plough track, the original guide for flying through this desolation from Amman to Ramadi in Iraq, becomes more tortuous, twisting and turning round little isolated precipitous mountains set amongst a chaos of black rocks. This is the " lava " country whose sharp coal-like rocks present an effectual barrier to motor-car and camel alike. The Bedouin when moving from one mud flat to another in search of grazing must keep to the narrow sandy track which winds between the boulders in the valley bottoms, and the car can only use tracks which have been laboriously cleared. These mountains are only visited by occasional parties of Druze



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tribesmen from the mountains to the north, whose tough little ponies cover the most impossible country at astounding speed.

It is here that we first begin to notice little collections of stone circles and long lines of stones which in bad light can easily be mistaken for the plough track which we are following. In many cases the hut-circles cluster near the tops of steep-sided hills and from them two or three walls radiate down into the valley. In some cases the circles form a double wall of stones and the radiating lines of stones converge into the inner enclosure. There is now no permanent water supply to be found, but no doubt small winter crops of corn could be grown if the Bedouin did not despise such useful work. As has been said, the mountainous country is only occasionally visited by Druze tribesmen while the Bedouin only penetrates to the Wadis and mud flats amongst the hills. The mountain range forms a barrier between the Beni Sukhr tribe of Transjordan and the Ruwalla, who move with the seasons from the fringes of French Syria to the gravel plains of the desert to the southward and to the east of the Jebel Druze. There is little or no east and west traffic through the mountains here except for the air mail, armoured cars of the Royal Air Force and occasionally the Nairn mail motor cars, which follow the air mail route when the better route by Damascus is unsafe. This route has not been used in ancient times ; if it had been, the clearing of boulders necessary for such a route would be easily noticed from the air. The hundred miles of almost waterless gravel plain to the Eastward was no doubt too great an obstacle to cross.

The camps should be divided into two types :—

- (a) those in purely defensive positions from the point of view of a general defensive scheme.
- (b) those which are isolated and were used possibly as cattle strongholds.

Thus all along the southern edge the hills are defended by ' rose shaped ' enclosures connected together by a series of single walls, sometimes with other odd walls running out at unaccountable angles. The vast majority of such walls were, I think, defensive against man ; and in many cases are in country up which cattle could not climb, except at occasional easier slopes. Sometimes they do not even appear to have a defensive value, but then it must be remembered one cannot get a very good idea of the lie of the land from the air. The enclosures are, I think, mostly single-walled, and few, if any, have ' fan walls.'

PLATE] II



HILL-FORT IN BASALT COUNTRY, ARABIA

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facing p. 201

TRE'R CEIRI
CARNARVONSHIRE.



ANTIQUITY

Those of the second type occur in the scattered hills in the gap, which have many double-walled camps with 'fan-walls' extending out into the wadi bottom around them.

The walls of the camps follow the line of the hill and are often most irregular in shape—separate little circles within the main defence walls are quite common.

I should guess that many of the enclosures were about 300 yards and that the double walls would be about 12 yards apart, but of course it is very hard to say from the air unless one took special care to note it.

One double peak which I can remember well had a complicated system of fortifications. Each top had a camp, the saddle connecting them had communicating walls, and half way down the hill was a third wall which went round the whole.

Many of both the walls and circles are very complicated and difficult to understand, but those with 'fan walls' appear to be of more obvious use. Frequently these walls are seen radiating from a group of hut-circles on a hill top or hill side, and running for some two or three miles in a straight line. They are particularly conspicuous from the air, and in bad light the straight line of the wall at times resembles the plough furrow track which the air mail follows. The possible use of these walls was the subject of many discussions amongst air-mail pilots but the general opinion was that they were used to assist in driving cattle grazing in the valleys into the defended camps at the approach of hostile forces. This seems a probable use for them, as many actually lead into the inner ring of double-walled camps and extend down across valleys, so that a few horsemen could rapidly drive the herds up into the camp. The actual height of the walls is difficult to determine from the air, though judging by their shadows, they are not very high, probably no more than two or three feet;—they consist of boulders dragged into line. The photographs were taken at random and do not shew a good example of these radiating walls.

The circles and walls give the impression that they were used by a race of people who were at least partially settled, with herds and small crops, who feared the inhabitants of the richer land to the westward, and therefore fortified steep hills and the southern edge of the 'gap' into which the stronger people at intervals penetrated.

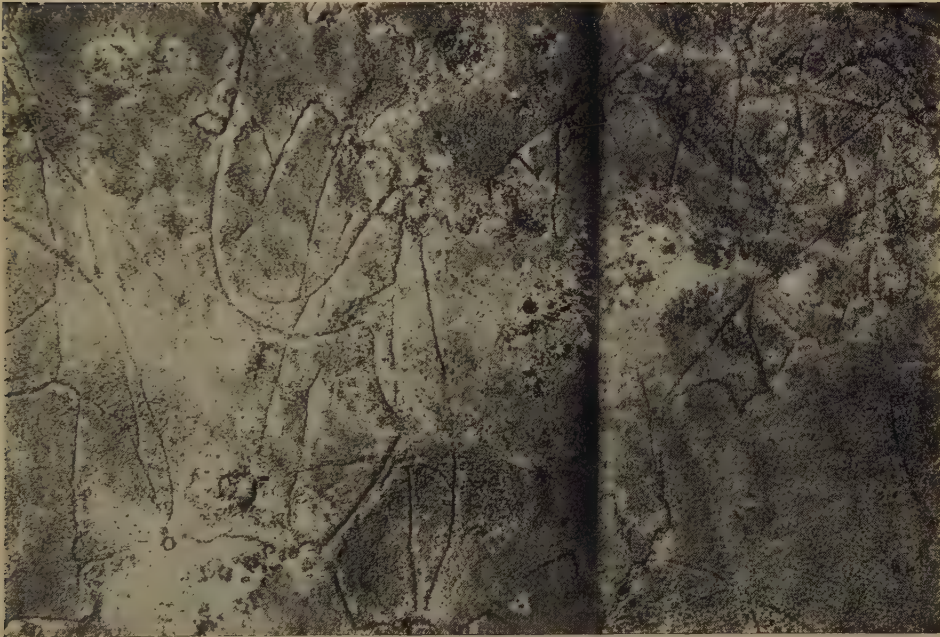
Whether there are other walls and circles in the mountains off the air mail route I am not in a position to say. Doughty mentions seeing hut-circles, but not walls, in the continuation of the same mountain ranges, some hundred miles to the south, and says that the

PLATE III



WALLS AND FORT IN BASALT COUNTRY

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WALLS AND ENCLOSURES IN BASALT COUNTRY

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facing p. 202

THE 'WORKS OF THE OLD MEN' IN ARABIA

Arabs attribute them to the Nasrany or Christian, by which they imply that they are pre-Islam; they certainly have the appearance of being of great antiquity.

[For purposes of comparison a plan of the celebrated Welsh hill-fort of Tre'r Ceiri on Yr Eifl is reproduced on p. 201. The resemblance to the Arabian hill-fort shown on plate II will be noticed at once. Both contain within the encircling stone ramparts a collection of large and small stone-built enclosures. The slopes of both hills are in places precipitous. Thanks are due to Dr Wheeler and the Honourable Society of Cymmrodorion for the loan of the block.

The air-photographs were all taken at about 11 a.m. on 2 February 1926 from a height of 2000 feet, with a lens of the focal length of 6 inches.—Editor].

The Aryan Problem—fifty years later

by A. H. SAYCE

IN archaeology as in other branches of science we are only at the beginning of discoveries. New vistas are opening up to us and we are beginning to realize how little we know about the origin and early history of civilized man. Theories and presumptions, chronologies and criticisms, all are being revolutionized. In Egypt, in Babylonia, in India and in Asia Minor discoveries are being made which teach us that we are still only upon the threshold of knowledge about what is called "the remote past" and how insecure are the foundations upon which most of our assumptions in regard to the earlier history of culture really rest. Many of our assumptions, in fact, have nothing behind them except want of evidence, and excavation in Egypt alone has proved, time after time, how archaeologically valueless negative evidence must be. All that it shows is that scientifically conducted excavation and archaeological exploration are still in their infancy. Negative evidence has been a favourite weapon of argument, especially among German scholars, and we need not be surprised that theory after theory based or partially based upon it has broken down. It is merely a survival of the early Victorian belief that science had mastered all the secrets of the material universe.

Mr Gordon Childe has just published an interesting and valuable book entitled "The Aryans,"¹ which in the light of recent discovery once more attacks the old question: Where did the Indo-European languages originate and where did they develop? The title is an ambiguous one, for there was no Aryan or Indo-European race or even people. As Mr Gordon Childe is at pains to point out, the term "Indo-European" or "Aryan" is purely philological. But who first invented Aryan speech we shall never know: was it a single individual, or a family, or a tribe or a group of tribes? Did the so-called parent-speech come into existence ready-made, or did it develop consciously or unconsciously out of some other form of language?

¹ *The Aryans, a study of Indo-European origins*, Kegan Paul and Co., 1926.

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All this must remain in impenetrable darkness. All we can do is to take and analyse it in the earliest form recovered by comparative philology when it was already divided into incipient dialects.

This is the form which Mr Childe has present to his mind, and the object of his work is to connect this group of embryonic dialects with some particular race or people. For this purpose he invokes the aid, not only of philology, but also of anthropology and above all of archaeology. It must be confessed that the result is to illustrate the old proverb about not being able to see the wood for the trees. But the trees have as yet been only partially examined, on the outskirts of the forest for the most part, and the forest itself is still trackless. Mr Childe himself inclines to the theory which would see the earlier home of the speakers of the Indo-European languages in southern Russia but he also states the difficulties in the way of its acceptance. All of which we can be sure is that the inhabitants of southern Russia and the Caucasus were in contact with Mesopotamian civilization.

Since the Great War a good many archaeological facts have come to light which necessitate a revision of our old beliefs. Excavations in north-western India for example, have revealed the existence of a culture which was closely connected with that of Elam and Babylonia in the third millennium B.C. At Harappa in the Punjab and Mohenjodaro in Sind (400 miles distant) the remains of cities have been found with painted pottery like that of Anau, Susa and Sumer, architectural details which remind us of the early Sumerians in Babylonia, inlaid work in mother-of-pearl and ivory closely resembling that of primitive Sumer, and more especially small plaques with incised figures of bulls and the like as well as with pictographs of peculiar forms. Evidence of similar plaques with incised figures of exactly the same shape together with the same pictographs has been found in Sumerian Babylonia and at Susa.² At Susa, where numerous pictographic texts have been disinterred, we know their date; they belong to the period of the Third Dynasty of Ur (2418–2380 B.C.). What is most remarkable is that not only are the Indian and Sumero-Elamite pictographs the

² In the *Revue d'Assyriologie*, xxii, 2 (1925) Dr Scheil has published a clay sealing from Jokha (the ancient Umma) in Babylonia which has an impression of one of these plaques. The line of pictographs stands over a figure of the "Susian" bull in front of which is an altar. As the back of the sealing bears the marks of some linen or cotton material it must have been attached to a bale of merchandise which would probably have come from India.

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same or similar in form, the groups are sometimes the same, implying that a similar language was known in India and Elam.³

As far back as the third millennium B.C., therefore, there was cultural, and possibly racial, continuity between Babylonia and the Punjab. The intercourse was by land; we have as yet no evidence that it was also by sea. A cuneiform inscription has been found at Mohenjo-daro; and many years ago (in 1887) in a presidential address to the Philological Society I drew attention to a discovery made on the hills near Herat and recorded in the *Journal* of the Asiatic Society of Bengal (xi, pp. 316, *sq.*). Among the objects discovered was a Babylonian seal-cylinder of black stone with an inscription of three lines in cuneiform characters of the age of the Third Dynasty of Ur. The seal was bought by Major Pottinger, but afterwards lost, fortunately not before a good copy of the inscription had been made by the purchaser and published in the *Journal*. Though the language is unknown, the ideographs in it show that it follows the usual Babylonian formula and reads: (1) AN NIN-ZI-in (2) *Sulammebel* (3) *Khiti-gar* ARAD-na, "To the goddess of Life Sulammebel, son of Khiti⁴ her (or thy) servant." Herat is a half-way house between Elam and India.

There was thus continuity of culture and trade, possibly also of language or race or both, between north-western India and the valley of the Euphrates at the very beginning of the Bronze-age. And the intercourse was by land and not, it would seem, by sea. We need not wonder, therefore, if the painted pottery of the chalcolithic period in India, Elam and Babylonia should belong to the same type, or that similar pottery should have been found at Anau south-east of the Caspian, at Sakche-gozü north of the Gulf of Antioch, or even in the north-west of China. A similar culture appears to have prevailed from east to west in Asia in the latter days of the Neolithic epoch; man is a roving animal, time was no object to him in his younger days,

³ Sir John Marshall in the *Illustrated London News*, 20 September 1924 and 6 March 1926, and Messrs. Gadd and Sidney Smith, 4 October 1924. At Mohenjo-daro there have also been found blue glass bangles and bars of copper which may have been used as coins and so remind us of the early knife-coins of the Chinese. Inhumation with contracted burial was practised originally; this was afterwards superseded by cremation, the ashes being deposited in urns. Below the Buddhist site (of the third century B.C.) are seven or eight earlier levels of occupation. A "Babylonian Seal" from Harappa has long been in the possession of the British Museum and was published by Terrien de Lacouperie many years ago in the *Proceedings* of the Society of Biblical Archaeology. It has a pictographic inscription over a "Brahminical" or "Susian" bull.

⁴ Or less probably a title like that of "scribe."

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and the arts passed easily from one end of the continent to the other.

Between Asia and Europe, Asia Minor and the Mediterranean formed a link. We are beginning to realize how early in the history of civilized man he ventured on the sea, at all events if that sea were the Mediterranean. And his later history shows us that Asia Minor must always have been the natural bridge of his migrations from east to west or west to east.

As yet Asia Minor is, archaeologically, almost a blank. But the cuneiform tablets of the old Hittite capital at Boghaz Keui in Cappadocia, about 20,000 of which, including fragments, are at Berlin, while others are in Constantinople, are now throwing light on the history of the country and its population in the second millennium B.C. And already they are obliging us to reconsider and revise many of our old beliefs. Among the tablets there are some which relate to a people called the Akhkhiyawas, in whom Dr Forrer is certainly right in recognizing the Akhaeans of Greek literature. They are described as inhabiting the western coast of Asia Minor and one of their chiefs is expressly described as coming from Lazpa or Lesbos, in fact in one passage⁵ we read: "the god of the city of Lazpa who is the god of the city of the Akhkhiyawa." In another passage mention is made of the *Ayawalas* or Aeolian. In the 14th century B.C. Attarsiyas, whose name I have identified with that of the Greek Perseus, the founder of Tarsus,⁶ was in the pay of the Hittite king, and as the Hittites were an inland and not a maritime power his fleet of 100 ships was employed in the service of the Hittite king. He and the prince of Bigga (perhaps Pêgai on the Hellespont), we are told, were not "servants," but semi-independent "generals" of the king.⁷

From the Hittite cuneiform texts, so far as they have been as yet published, I have gathered that the Akhaeans were at the time a purely Asianic power. Whether any of them were settled in Greece itself there is no evidence; those with whom the Hittite kings had to deal belonged to Asia Minor. And since the Ionians were of Asianic origin, the name itself being Asianic, while Greek tradition made Iôn (like Akhaïos) son of the "tawny" Xuthos and not of Hellên, the

⁵ KUB p. 25, line 57. See the *Classical Review*, Nov. 1924, p. 164.

⁶ *Journal of Hellenic Studies*, xlv, 2 (1925).

⁷ KUB xiv, p. 7, l. 89. *Marêwanas*, the *mariyanni* of the Semitic texts ("mercenary generals"). Forrer reads *Kuirewanas* and identifies the word with *kuirwanas* "princelings," Greek *κοιρανισ*. In the Hittite script *ma* and *ku* have the same forms. The long vowel after *r* seems to preclude Forrer's identification.

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natural conclusion is that at which Ernst Curtius arrived many years ago on other grounds, that the famous " Ionic migration " instead of being from Greece to Asia Minor was in the converse direction. It was, too, in Asia Minor that the earliest Greek literature grew up and that Homer recounted the deeds of Akhaean warriors.

Now the Homeric poems imply a long preceding period of development. The Homeric dialect is exceedingly artificial and so also is the metre in which it is written. Both seem to demand the existence of a script rather than oral tradition. We now know that syllabaries were in use in Asia Minor and Cyprus at an early date as well as pictographic writing, to which the *σήματα λυγρὰ* of Iliad vi, 168 appear to make allusion. And the recent French discoveries at Jebél (Byblos) have pushed back the use of the Phoenician alphabet to a startlingly early date. Inscriptions in it have been found in a tomb of the time of Ramses II (1300 B.C.), the letters with three exceptions having already exactly the same forms as those of the Mesha text more than 400 years later. There is, therefore, no longer any difficulty in assigning the earliest Greek examples of the alphabet, discovered in the island of Thera, to a very much earlier period than epigraphists have hitherto ventured to do; to the age, in fact, when, as in the Iliad, Sidon had not yet been superseded by Tyre as the leading commercial mart.

The alphabet of Thera is closely allied to the Old Phrygian alphabet, though in one or two points, like the shape of the *iota*, it exhibits later forms. But there are evidences that the alphabet must have passed to Greece through Asia Minor. On the one hand, certain letters have been added to it which betray an Asianic origin; on the other hand both the Old Phrygian and the early Greek scripts mark the division between words and write the lines in the so-called boustrophedon fashion. So far as is known, there is only one other script in Western Asia, that of the Moscho-Hittite hieroglyphs, which employs this curious fashion of writing, and it is also a script in which the words are divided from one another by a special sign. Old Phrygian inscriptions have been found in the neighbourhood of Boghaz Keui, and another Old Phrygian inscription was discovered by Professor Garstang at Tyana, the modern Bor, which belongs to much the same period (the end of the 8th century B.C.) as the Hittite hieroglyphic texts which have come to light in the same district. There is only one explanation of this; the Phoenician alphabet must have made its way westwards through the medium of a people who had been previously accustomed to the use of the Hittite hieroglyphs.

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The Phrygians spoke an Indo-European language and the Greek writers tell us that they came from Thrace.⁸ Midas had his rose-gardens at Angora as well as in Macedonia, and the Paphlagonians were of Thracian ancestry.⁹ Herodotus (vii, 73), states that the Armenians were a Phrygian colony; this, however, applies only to the Indo-European conquerors who overthrew the old Vannic kingdom in the "dark period" between 660 and 530 B.C. The linguistic effect of this conquest was parallel to that of the Anglo-Saxon conquest of England; the older language of the country was superseded by Indo-European Armenian, and the names of the towns and villages became Indo-European also. But the conquerors were merely a military caste who were eventually absorbed by the conquered people and the present brachycephalic population preserves unchanged the old racial type.

Of the three skulls found by Schliemann in the second city of Troy it is significant that the two male skulls were dolichocephalic while the female skull was brachycephalic. On the archaeological side the culture of this second city was European and goes back to Thracian and Danubian origins. The earliest examples of bronze implements yet discovered to which a date can be assigned were found among its ruins. So far as our present knowledge goes, no tin is known to exist in Asia Minor, and the tin deposits of Bohemia and the Danubian region would have been the nearest sources from which it could have been obtained. But as practically no remains of the Bronze Age have been found in Thrace proper it would apparently have come by sea.

When and where was bronze first made? It must have been in some part of the world where copper and tin were found in close proximity and we now know that tin became known to the world of the eastern Mediterranean at an earlier period than was formerly imagined. At Tello in southern Babylonia the French excavators disinterred a tablet of the pre-Sargonic period, that is to say before 2750 B.C., on which mention is made of "5 manas of tin" (*Zabar kû-lukhkha*, literally "bronze [with] the shining-white metal"), while further mention is made of three objects containing 1 mana, 4 shekels of *urudu lukhkha*, "shining-white copper," 10 $\frac{2}{3}$ shekels of lead, 4 $\frac{1}{2}$ shekels of a metal called NE-KÛ and half a shekel and 21 grains of an unknown ingredient (SUG-GAN).¹⁰ In accordance with this, a survey of the high-roads (SIL-DAMALLA) of the Babylonian Empire compiled

⁸ Strab. 330, frag. 25.

⁹ See Strab. viii, 501, xii, 785; Scholiast to Apollonius Rhodius II, 181.

¹⁰ *Nouvelles Fouilles de Tello* I, p. 55.

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for Sargon of Akkad (2750 B.C.) states that "beyond" the Mediterranean sea, the western boundary of the empire, were the island of Kaptara (Caphtor) or Krete and "the Tin-land" (*anakû-ki*), as Dr Forrer was the first to point out. At that early period, accordingly, ships were already bringing tin to Asia from Spain, or, less probably, northern Italy.¹¹ But before maritime expeditions of the sort could have been sent to the distant West, the peoples of western Asia must have become acquainted with the metal nearer home.

We may conclude, therefore, that a knowledge of tin, and therefore of bronze, was brought to Asia Minor, and from thence spread to the rest of the civilized Eastern world, by traders or emigrants from Europe whose remains we have in the second prehistoric city of Troy. I propose to see in them the Proto-Phrygians.

Now the cuneiform records of the Hittite Empire have shown that before the 15th century B.C. there were peoples or tribes in northern Asia Minor whose language was not only Indo-European but Sanskrit. It was substantially the language of the Rig-Veda and its speakers must have carried it to India. They were breeders and trainers of horses and were apparently nomadic. The Hittite records have further shown that the governing class of the Hittite kingdom itself represented a military feudalism which resembled the feudalism of the Middle Ages in Europe. They had evidently conquered the native population like the Norsemen in later times and held their lands upon a similarly feudal tenure.

But the cuneiform texts have also revealed another and unexpected fact. The Official Hittite embodied in them is more than a mixed language; it is an extremely artificial one. There has been a large amount of borrowing from Babylonian grammar and vocabulary; the native language, for instance, had no prepositions, but they have been introduced freely from Assyrian and the texts are full of them. The prepositions *ana*, *ina*, *sa*, *gadu* and the like meet us in almost every line. The Indo-European element in both vocabulary and grammar is even greater than the Babylonian and so far as grammar is concerned is comparable to the Romanic element in English. Indeed it is difficult for any but the Englishman to estimate the real character of the mixture, and it is, therefore, not surprising that the original language itself has been claimed as Indo-European. What increases the difficulty is that the admixture proves how close and long-continued the contact between Hittite and Indo-European must have been; there were borrowings and, above all, assimilations on both sides and it will be long before we

¹¹ Schroeder: *Keilschrift-texte aus Assur*, 1920, no. 92, l. 31.

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can determine in many cases on which side the borrowing has been.

Professor Hrozný, the pioneer in the decipherment of the Hittite texts, was naturally impressed by the prominence of the Indo-European element which seemed to permeate both lexicon and grammar. But with the progress of decipherment we have learnt that much which was supposed to be Indo-European was due to mistranslation, and that Hittite grammar no longer wears the purely Indo-European appearance which seemed to belong to it at first. The root *da-*, for example, was referred by Hrozný to the Indo-European *da* "to give," and by myself to the Indo-European *dha-* (*dhe-*) "to place," but it now turns out that its true signification is neither "give" nor "place," but "take." So, again, along with Indo-European (or apparently Indo-European) grammatical suffixes, we now find that there are others which are Asianic. Thus the suffix *-t* denotes not only the 3rd person of the verb, but also the first as in *êskhat* "I was," *êslut* and *êslit* "I will be," as well as the second, and the second person plural of the imperative gives us the forms *êstummat* "seat yourselves," *kiddu-mati* "lie" and *sarâ-tuma* "divide yourselves." The suffix *-i* denotes both the first and third persons; from time to time no distinction is made between the singular and plural, while the suffix *-an* can stand for any person, tense, or voice, and occasionally there are no suffixes whatsoever (*esa* for *esat* for example). Friedrich has lately pointed out that the first person of the future (which is also an imperative) is expressed by the suffix *-lu*, *-la*, as in *aggallu* "I will die," *biskellu* "I will give," *uwalla* "I will see." But forms like *daiya-zi-las* "the thief," *linik-zi-el* "pardoner," where the nominal suffixes *-las* and *-el* are attached to the so-called third person of the verb are quite sufficient to convince the comparative philologist that we are not dealing with an Indo-European language, however much it may have been influenced by the analogies of Indo-European grammar.¹² The suffix *-zi* itself, which

¹² Equally convincing is a form like *paizzi-us* where the plural of the noun (*-us*) is affixed to the so-called third person of the verb. Thus in the Legend of the Great Serpent we read (KUB xii, p. 50. 3, 4) (*nu*) *paizzi-us khantêzzius sûmus iêr* "the gods who go in front effect (it)." No distinction, it will be observed, is made between the verbal and nominal suffixes in *paizzi* "he" or "they march" and *khantêzzi(s)* "foremost." So in the Legal Code (II, 85) we read: *kuenzi-us khassus khuis-nu-zi-ya-(u)s* "the king may kill or (literally and) let (him) live." And *-zi* can denote the second person as well as the third; e.g. *istamas-zi* "thou hearest" (KT. v. 9. II, 17), while in forms like *kistan-zi-attat* (KUB II, 7, 46) we find a double verbal affix. The Asianic verbal suffixes *-r* and *-tari*, it may be added, were borrowed by some of the Indo-European languages.

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generally denotes the third person both singular and plural, is also found with the second. But our knowledge of the Hittite verb is still very imperfect ; so far as I can discover it has no tenses or moods in the Indo-European sense of the terms any more than the Semitic languages, and until this fact is realized it will remain a constant puzzle.

We must not forget, moreover, that the verbal and nominal suffixes which present at first sight such a startling similarity to those of the Indo-European speech are also found in the non-Indo-European languages of Asia Minor and Armenia. The suffix *-t*, for example, is used for the third person of the verb in Vannic, in Lycian, and in Lydian; the first person is denoted by *-bi* (i.e. *-wi*) in Vannic, and it must be remembered that in Hittite, as in Babylonian, *m* had the value of *w* so that the Hittite *wakhnu-mi* "I cause to circle," for instance, would have been pronounced *wakhnu-wi*. So, too, in Vannic, in the declension of the noun the singular (and plural) nominative terminates in *-s*, the accusative in *-n* (or *-ni*) and the oblique case in the vowel of the stem. It is the same in Hittite except that the nominative and accusative singular of the noun can also be denoted by the suffix *-l* (Vannic *-li*).¹³

Only one satisfactory explanation of this is possible : Hittites and Indo-European speakers must have lived in close contact with one another for centuries. There would have been borrowing on both sides, and still more, assimilation of words and forms. In the artificial literary language which helped itself so freely to Babylonian words and forms this would have been consciously intensified. The conclusion is verified by an examination of the Hittite vocabulary, where, however, the percentage of words which can be regarded scientifically as borrowed from Indo-European is considerably less striking than in the case of the grammatical forms. Here it was rather the Indo-European languages, more especially Greek and to a less degree Latin

¹³ As Kretschmer writes (*Wiener Zeitschrift für die Kunde des Morgenlandes* xxi, p. 3) "Das nominativische *-s* ist eine Erscheinung, die das Indogermanische mit dem Finno-Ugrischen und verschiedenen vorderasiatischen Sprachen, nicht nur dem Kanischen (official Hittite) und Luvischen sondern auch sicher un-indogermanischen Harrischen (Mitannian) und mit dem Lydischen teilt." The suffix *-l* can be used verbally (as in Vannic) like *fabil* "he manufactured" in Lydian; e.g. in the Legal Code we have *khurkil* "he is guilty" (not the abstract "guilt" as it has been translated). *Khurkil* corresponds to forms like *Alisa-il* "he of Alisa," *Zibiskhuna-il* "he of Zibiskhuna" and in words like *Khattusi-lis* "he of Khattusis" (Boghaz Keui) we find the Indo-Europeanized suffix *-is* in addition. Cp. the Etruscan suffix *-l* which can similarly annex the suffix *-(a)s*.

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(through Etruscan) that were the debtors. In many cases, of course, it is impossible to say, at all events at present, on which side the borrowing lay.

But so far as my examination of the facts has gone it has led me to the conviction that it was in Asia Minor that the Indo-European languages developed ; their origin is another matter altogether. And a further conclusion, coupled with the glimpses of early Akhaean history which the tablets of Boghaz Keui are beginning to give us, is (as I have already said) that Ernst Curtius was right in his belief that the so-called Ionic Migration was from Asia Minor to Greece and not conversely. Asia Minor was the earlier home of Javan.

After all it is only what the old traditions averred. They brought Pelops, who gave his name to the Peloponnesus, from Phrygia and made him the son of Tantalus whose name I showed many years ago was the same as that of the Hittite Tutkhaliyas and the Biblical Tid'al. Perseus, the founder of Tarsus, whose image stood at the entrance to Ikonium, was the son of Danaë and grandson of Akrisios, the Phrygian Kronos (according to Hesychius), while Danaos himself was a brother of the Egyptian king.

What language the Akhaeans spoke we do not know. Some of their names are Greek, but others do not seem to be Indo-European. Possibly their language was mixed like that of the Troad where Homer has recorded words and names in the respective languages of " gods " and " men." Nor do we know to what race the original speakers of the Indo-European tongues belonged. The Phrygians, indeed, came from Thrace, and Xenophanes tells us that the Thracians were " grey-eyed," γλαυκούς (like γλαυκῶπις Ἀθήνη in Homer) and " ruddy " (ἐρυθροίς) of skin.¹⁴ With this must be compared an important but little-known passage in the *Physiognomica* B 32 of Adamantius (415 A.D.), quoted from Polemo, a writer of the second century B.C. " But where the Hellenic and Ionic race has been preserved in its purity its representatives are naturally big men, broad, upright, compact, white of skin, blond, . . . with yellowish hair, soft and nicely curly ; the forehead is square, the lips thin, the nose straight, the eyes liquid with much light in them, for the Hellenic has better eyes than

¹⁴ *Ap. Clem. Alex. : Strom.* vii, p. 302. Mr Casson (*Macedonia Thrace and Illyria*, p. 164) quotes a passage in Firmicus Maternus (*Mathes.* i, 1). " Omnes in Aithiopia nigri, in Germania candidi, in Thracia rubri procreantur." The Thracians were *rubri*, however, because they were sunburnt, but not ξουθοί or " bronzed."

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any other race.”¹⁵ Unfortunately our knowledge of the Thracian language is of the scantiest ; among the few glosses, however, that have come down to us there are words like λεβα “ city ” (in Hesychius) which are not Indo-European.

At present we must be content with the fact that the Hittite official language was in such close contact with certain of the Indo-European languages, notably Proto-Greek, as to have been strongly influenced by them and to have influenced them in turn, and that one of these languages was Proto-Sanskrit. The basis of Hittite itself was an Asianic language called Luian in the texts (or Luvian as Forrer writes it), which has borrowed but little from either Indo-European or Semitic and in several instances indicates what had been the earlier form of a Hittite suffix before its assimilation to that of another tongue. Thus the nominative -s appears in Luian as -nza (e.g. *Tarkhunza*) in the singular and -nzi (e.g. *kuinzi*) in the plural, pointing to an original -n's (a) and -n's (i). So again, in Luian the substantive verb is *âs* with a long vowel which raises the question whether, after all, the corresponding Hittite verb has not been assimilated to an Indo-European root.¹⁶ That, I believe, has been the case with the word for “ water ” which is usually written *watar* in the Hittite texts. But the oblique case is *ueteni* (also *uwiteni*) and the nominative also occasionally appears as *uidar*. The alternative forms suggest borrowing or assimilation, and when we find that the corresponding Luian word was *uidanza* (with dative *uida*) our suspicions that there has been assimilation to the Greek or Phrygian equivalent are confirmed. At all events the word for “ earth ” has the varying forms *tegan*, *dagan*, *takkan*, and in spite of the Tocharian *tekne* is of Asianic and not Indo-European origin.

It is noticeable that among the multitude of Hittite deities none is Indo-European. The supreme god of the capital itself was Tessub, the Teisbas of the Vannic inscriptions. “ Istar of Nineveh ” and

¹⁵ εἰ δὲ τισὶ τὸ Ἑλληνικὸν καὶ Ἰωνικὸν γένος ἐφυλάχθη καθαρῶς, οὗτοι εἰσιν αὐταρκῶς μεγάλοι ἄνδρες, εὐρύτεροι, ὀρθιοί, εὐπαγεῖς, λευκότεροι τὴν χροάν, ξανθοὶ . . . ἔχοντες τρίκωμα ὑπόξανθον, ἀπαλῶτερον, οὐλον πρῶως. πρόσωπον τετράγωνον, χεῖλη λεπτά, ῥίνα ὀρθήν. ὀφθαλμοὺς ὑγροὺς . . . φῶς πολὺ ἔχοντες ἐν αὐτοῖς. εὐὸφθαλμώτατον γὰρ πάντων ἔθνων τὸ Ἑλληνικόν. I have seen shepherd-boys in the Peloponnesus of the same type ; their eyes were a liquid blue.

¹⁶ Forms like *e-es-khut* “ I was,” *e-es-lut* “ I will be ” indicate that the vowel was long. *E-es-khar*, “ divine blood,” as shown by the borrowed Greek *ἰχώρ* (which has no Indo-European etymology), would have had as its equivalent in Greek *ῖς* (-χωῖ) with long *iota*.

THE ARYAN PROBLEM—FIFTY YEARS LATER

Ea of Babylonia were borrowed from the Semites, but we look in vain for the familiar deities of the Indo-European speaker. Once, indeed, Agni, the Fire-god, is mentioned, but elsewhere it is the native Pakhkharr who is coupled with Miyasas the Water-God.¹⁷ The fact must be associated with another fact, that the royal names with the exception of two or three Babylonian and about an equal number of Indo-European ones are all Proto-Hittite. So, too, was the name of the capital (Khattusas "the silver-city," Boghaz Keui). From time to time we hear of a high official like the *rab mesedi* (commander of the body-guard?) "interpreting" (*tarqumeyaezzi*) to the king, and on one occasion when the king makes a progress from Arinna to the capital he "interprets" his orders to his secretary. Does this explain why, in spite of the strong feudal element in the state which must be referable to an aristocracy whose language was Indo-European, there is no trace of Indo-European theology? At any rate it would presuppose some Proto-Hittite influence upon the language, though our present knowledge of Proto-Hittite does not enable us to detect it, unless it is to be found in the extraordinary agglomeration of particles and pronominal fragments which characterize the Hittite sentence and remind us of the incorporating languages of America and Basque. Similar prefixes distinguish Proto-Hittite where they serve to bind the words of a sentence together like the prefixes of B-antu.

¹⁷ In ordinary speech *missa* (also written *mas*) was the word for "water." When the king requires water for washing his hands he is always said to cry: *kas* (or *ka*) *missa* "water here!"

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THE TOMB OF QUEEN HETEPHERES (PLATES I-II)

We mentioned in our last issue the discovery by Dr Reisner of the Tomb of Hetepheres, the mother of Cheops. Since then, Dr Reisner has given some account of his discoveries in a series of articles in *The Times*. These were published in four consecutive issues beginning 2 March. Each account was accompanied by illustrations. We wish to thank Dr Reisner for permission to summarize his articles. We wish also to acknowledge our thanks to the Editor of *The Times* for courteously allowing us to publish this summary, and for lending us two original prints for reproduction (plates I, II).

A word must be said about the outstanding importance of this discovery. It is unique. The date, according to Dr Reisner, is "about 3000 B.C. . . . This intact tomb presented for the first time in the history of Egyptian excavations an opportunity of studying the burial of a great personage of an early period, 1500 years older than the Royal Tombs of the New Kingdom."

The tomb consisted of a roughly rectangular shaft cut in the solid limestone to a depth of about 100 feet, just to the east of the Pyramid of Cheops. The strata of limestone were unsound until just above the burial chamber, and the extreme depth of the shaft is doubtless due to this fact. The chamber at the bottom, which measured 10 feet by 18 feet and was about 6 feet high, was evidently unfinished when the work was stopped. The tomb differed from any others found at Giza in being a secret one. It had no superstructure, and the two openings were hidden under the floor of the avenue leading to the pyramids of the Queens of Cheops. The opening first discovered was closed by a layer of plaster and beneath that closely packed blocks of limestone. The removal of this disclosed a flight of twelve steps leading into the main shaft. The shaft, like the staircase, was packed with limestone. At 10 metres down a niche was found in the west wall, containing the remains of a sacrifice, the skull and three legs of a bull wrapped in a mat, two beer jars and some charcoal. At various depths there were found two chips of black

PLATE I



GOLD CASING FROM CANOPY OF QUEEN HETEPHERES, ABOUT 3000 B.C.

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basalt, like the stone used in the pavement of the pyramid temple of Cheops. The actual entrance to the chamber, like the shaft, was packed with limestone.

Looking in from the entrance, the excavators saw a marble sarcophagus with its lid in place. Partly on the sarcophagus and partly behind it, lay the gold-encased poles and beams of a dismantled canopy (plate 1). On the western edge of the sarcophagus were spread several sheets of gold inlaid with faience, and upon the floor was a confused mass of gold-cased chairs, a set of eight alabaster toilet jars and the sheets of inlaid gold. Then followed the remains of a carrying chair and bed, bearing four inscriptions, which all read alike, "The mother of the King of Upper and Lower Egypt, the Follower of Horus, the guide of the ruler, the favourite one whose every word is done for her, the daughter of the god of his body, Hetepheres." The position of the "king's mother" was the most important which a woman could hold in the age of the pyramids. The next three titles are those of a king's wife, and show that Hetepheres was a wife of Sneferuw, but the meaning of the third title is obscure.

The process of excavation confirmed Dr Reisner's original belief that the deposit was a reburial. He considers that the original tomb of Queen Hetepheres was without doubt made by her husband, Sneferuw, beside his own pyramid at Dahshûr. It is probable that she outlived her husband and was buried by her son Cheops, for several of the boxes of objects are fastened with lumps of mud marked with the impression of the official seal of the funerary store-house of Cheops. The condition of the contents of the Giza tomb proves that thieves had broken into the one at Dahshûr. When the royal police discovered this, Cheops, no doubt, ordered the removal of the body and all the funeral furniture to Giza, and had it placed in a secret tomb prepared for the purpose. The tomb was still unfinished when the removal from Dahshûr began, and the masons apparently left in haste, dropping some of their tools. Five of these were found on the floor of the tomb. They were of copper and of two forms, one like a stone-punch, the other perhaps a crushing tool, and both of a pattern hitherto unknown in ancient Egypt. The floor was still covered with dust and chips from the mason's work and the boxes were placed on this rubbish. Everything from the original tomb seems to have been transferred, even the rubbish left on the floor by the thieves, and the dismantled canopy, which could not be set up in the low chamber at Giza, had been laid across the sarcophagus.

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Amongst the objects on the floor was a gold-encased box, the lid of which was inscribed in relief " the mother of the King of Upper and Lower Egypt, Hetepheres ; box containing *deben*-rings." The exact meaning of the word *deben*, hitherto unknown, was given by the contents of this box, which proved to be two sets of ten anklets, inlaid with dragonflies of malachite and cornelian, and graduated in size to fit the swelling of the leg (plate II). Other objects were a copper ewer and basin, three plain gold cups and a copper needle. There were also seven razors, two of gold and five of copper, and seven knives, three of gold and four of copper. Both these implements were also found in flint. Many vessels of alabaster and pottery have also been found.

Most of the wood, both of boxes and furniture, was decayed, or destroyed by fungus, but some pieces are preserved within their gold casings though shrunk to about two-thirds their width and half their height.

The plain rectangular sarcophagus of alabaster, the simplicity of which was in keeping with the other furnishings, was found to be empty, but it is still hoped that the mummy may be discovered walled up in the tomb.

It is difficult to realize the great age of this tomb. To say that it is almost five thousand years old is true, but our imagination is not stirred. In the days of Cleopatra it was already as remote as Homer is from our times. The golden relics lay mouldering there when Moses led the Children of Israel from Egypt, and when Tutankhamen's magnificent obsequies were celebrated. Kings and prophets have passed, and for our eyes has been reserved the privilege of seeing for the first time the jewelry of the mother of Cheops, who built the Great Pyramid.

PALAEOLITHIC MAN IN SCOTLAND

The Alt nan Uamh or Burn of the Caves lies about three miles south of Inchnadamph in Sutherland. The caves, four in number, are situated at the base of a limestone cliff and are about $1\frac{1}{2}$ miles above the confluence of the burn with the Loanan. Their elevation is about 1000 feet above sea level. From the mouths of the caves a steep scree descends some 200 feet to the bed of the burn, which at this point is dry except during heavy rains.

The first cave yielded nothing of great interest, and it was therefore decided to abandon further work and commence excavations at the cave immediately to the east.

PLATE II



DEBEN-RINGS (ANKLETS) OF QUEEN HETEPHERES, INLAID WITH MALACHITE, LAPIS LAZULI AND RED CORNELIAN; ABOUT 3000 B.C.

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Accordingly, about the end of June, a start was made, and almost at once we were fortunate in finding the burrs and portions of the horns of several reindeer. Owing to the large number of these horns which were eventually found in this cave, it was named the Reindeer Cave.

Without going into technicalities, it may be mentioned that, broadly speaking, the upper deposits contained mammal and bird bones of a moderately remote period together with two objects made by the hand of man. One of these was an awl, about 4 inches in length, which had been made from a splinter of bone. The edges of the splinter were rounded and the flat surfaces highly polished through use. The other object was a large pin made from a cetacean bone. It was found in two pieces, about 6 feet apart. The head was formed of a large loop which originally had had another loop attached to one side of it, but when the pin was found, this latter loop was wanting. It is of interest to state that no similar pin is in the Scottish National Museum.

About 15 feet from the mouth of the cave, on the west side, a natural pillar about 3 feet in height was brought to light. This was connected with the side of the cave by a natural wall about 3 feet in length, of similar height and of about 1 foot 6 inches in thickness.

At the back of the wall a bay or recess was noted which extended to the back of the cave. In this bay a ceremonial burial had taken place in the red cave-earth—the first ever noted in a Scottish cave. Close behind the above mentioned wall, two flat stones set on edge and about 8 feet apart were observed. These formed a small enclosure in which a dolichocephalic skull resting on its occiput and facing the roof of the cave was found. Both upper and lower jaws were wanting and no teeth were noticed in connexion with this burial. Behind the skull four of the vertebrae and the sacrum were brought to light, but there was none of the larger bones of the body.

The phenomena connected with this burial are noteworthy and seem to present certain analogies to the Azilian-Tardenoisian ceremonial burial found at Offnet on the Danube.

The pin above described was found in association with this burial.

It is however, to the deposits of a much earlier period that the great interest of the excavation is attached. Beneath the layer of red cave-earth already mentioned was a layer, about 18 inches to 2 feet in thickness, of waterworn gravel and sand which had been washed into the cave by a lateral stream from the melting glacier which at that time filled the valley. In this stratum were found the horns and bones of the reindeer, the bear and many other animals. The horns of the

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reindeer were extraordinarily numerous, over 800 burrs being found. Practically all of these were "shed" horns and had belonged to young animals. All the animal remains from this bed were in a highly fossilized condition—differing in this respect from the bones found in the layer above.

At the extreme back of the Reindeer Cave a natural chimney was encountered which descended vertically about 10 feet 6 inches. This opened into a large cavern which was practically filled to the roof with a fine silt. Owing to this fact it was impossible to ascertain the full dimensions of the cave, but a measurement of about 94 feet in length was obtained, although this did not appear to be the extreme back of the cavern. As far as it was possible to determine, the deposit of silt above mentioned contained no vestige of animal remains except in the top 12 or 15 inches. Here again were found portions of reindeer antlers and, for the first time in Scotland, the remains of the cave-bear (*Ursus spelaeus*) and the Arctic fox (*Canis lagopus*). The bones in this inner cave were comparatively sparse, and the evidence thus obtained justifies the assumption that, at the time this cavern was filled with the barren silt, ice had entirely enveloped the neighbourhood; and the remains found in the top layer would seem to indicate that an amelioration of the climatic conditions had occurred, permitting animal life to advance into the hill country.

To return however, to the chimney; this was entirely filled with gravel and sand and contained many similar bones to those already mentioned. At a vertical depth of about 6 feet, in association with a large canine tooth of a bear and some of the large bones of this animal—all in a high state of fossilization—was found a fragment of a small horn artifact about 2 inches in length; possibly a portion of a spear-point. The importance of this find will be realized. Here we have evidence of man's existence in the north of Scotland at a time when ice, many feet in thickness, was covering the mountainous portion of the country and glaciers were slowly moving down the valleys.

It will no doubt be asked when the last ice-period terminated in this country. The problem is purely a geological one, but it may perhaps be taken that the final melting of the ice occurred many thousands of years ago. Thus we have proof for the first time of the existence of man in Scotland in the late Palaeolithic period. Heretofore it has been considered that the earliest evidence of man's inhabitation of this country was in Azilian-Tardenoisian times, and it is thus of very considerable archaeological and geological importance to have been

PLATE III



BRONZE HEADS FROM NEMI, MUSEO NAZIONALE (BATHS OF DIOCLETIAN), ROME

facing p. 221

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able to establish the fact of man's presence in the north of Scotland as early as the Magdalenian period of culture. Our conclusions have received corroboration from the great French archaeological authority, the Abbé Breuil, from whom we were fortunate in receiving a visit. Our work however, is not yet complete as we have other caves to examine. This we expect to do during the current year and hope to be able to throw further light on this highly interesting subject.

JAMES E. CREE.

[A full report of Mr Cree's paper, read at Edinburgh before the Society of Antiquaries of Scotland on 14 February last, will be found in *The Scotsman* for 15 February 1927.—EDITOR].

THE LAKE OF NEMI (PLATE III)

At a recent meeting of the Roman Historical Society, Signor Mussolini announced that the Italian Government, on the advice of a special Commission, was about to put in hand the work of recovering from Lake Nemi the two ships of Tiberius, which he described as "immense and superb vessels, with rooms and gardens and fountains, ornamented with marbles and precious metals and rare woods, all shining with gold and purple." This decision cannot but be a matter of the greatest satisfaction both to classical archaeologists and to artists. The artists and craftsmen who decorated his pleasure-ships for Tiberius, belonged to the very best period of Roman art, and some idea of their quality is given by the three bronzes rescued from Lake Nemi and now in the Museo Nazionale at Rome (plate III). The recovery of these alone would almost be worth the labour of recovering the ships, and the hope of other such treasures to follow will cause the liveliest interest in the operations. Of the historical and archaeological value of the recovery of the vessels, it is almost needless to speak. So complete a document of life in the early years of the Empire would have a unique interest and value.

The site of this hidden treasure is one of the most romantic imaginable. In the hollow of the Alban Hills lies The Mirror of Venus.

"The glassy lake that sleeps
Beneath Aricia's trees,
Those trees in whose dim shadow
The ghastly priest doth reign,
The priest who slew the slayer,
And shall himself be slain."

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The Arician grove, with its barbarous cult of Diana, its blood-stained priest and sacred tree, must have made a suitably romantic background for the cruises in which the Emperor Tiberius delighted, sailing the smooth waters in his magnificent ships, accompanied by his mistresses and favourites, and forgetting for a while Rome and all its multifarious business.

These two galleys were sunk in a storm during the reign of their builder, and attempts at their recovery have been made at various times. The first recorded essay was made, fitly enough, at the height of the Renaissance by the man who, more perhaps than any other, recovered the solid and austere spirit of Roman architecture and sculpture. Leon Battisto Alberti, architect to Sigismondo Malatesta, a tyrant, like the Tiberius of tradition, at once enlightened and brutish, was naturally drawn towards the secret of Lake Nemi. In the year 1447 he attempted to discover it, and, to that end, constructed an arrangement of pulleys and ropes, by which he managed to attach a cable to the prow of one of the vessels, which lay at a depth of 15 or 20 metres. He hoped, by this means, to draw it to the shore, but the cable broke, and nothing was brought up but a fragment of a colossal statue.

A century later Francesco Demarchi, the Bolognese military architect, donned a kind of primitive diver's helmet and descended to the bottom of the lake to survey the ships. He repeated this exploit several times although, on one occasion, a vein burst in his head and he came up with blood streaming from his mouth and nose. He brought up various fragments of wood and wrote a description of the vessels, noting, amongst other things, that the deck was paved with small red bricks.

Three centuries passed before any further serious attempt was made, but in 1827 the abandoned task was taken up by Annesio Fusioni, an hydraulic engineer, who seems to have been a person of a somewhat theatrical turn of mind. He determined to assume a diver's outfit and descend to the depths of the lake in the fashion of Demarchi. He needed an audience, however, for his daring exploit, and built a large platform to accommodate the crowd of scientists, artists and noblemen who were interested. In their presence he made repeated descents, bringing up several capitals of bronze pillars, fragments of marble pavement, the remains of a tablet inscribed "Tiberio Cesare," about 40 small terra-cotta tiles and numerous fragments of wood. In spite of this, however, Fusioni could gain no support for his enterprise, which completely ruined him, and at the end of his life he was obliged

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to make his living by selling pipes and tobacco boxes which he made himself of the wood he had brought up from the lake.

Another attempt was made shortly afterwards by Constantine Maes, a Flemish archaeologist. It was he who measured the vessels, the largest of which, lying nearest to the shore, is 140 metres long and 70 metres wide. Maes published articles and pamphlets on the subject, but no patron came forward to enable him to carry out the project.

In 1893, a certain Roman antiquary conceived the idea of fishing in the lake for treasures from the galleys. To this end he took up his abode in one of the villages on the shores of the lake and set to work in secret. He succeeded better than any of his predecessors, and it was he who brought up the Medusa head and the two bronze heads of wolves (plate III), which the Italian Government had to buy off him at a high price though they were, in fact, its own property. As soon as the news of his operations became public he was obliged to put an end to them. The whole question of the recovery, however, became the subject of public discussion, and was urged especially by Professor Emilio Gluria, who calculated that he could salvage the vessels for a sum of three hundred thousand lire. He did not, however, get the money, although the government of the day was inclined to listen with sympathy to his arguments. The question was once more dropped but, during the last three or four years, has been the subject of a vigorous propaganda in the Italian press, and now, it seems, the vessels are at last to be rescued, though not, apparently, by Professor Gluria's expedient of draining the lake. One cannot but hope that the ghosts of Alberti and the others may be invisible spectators of the work.

SYRIA

We have received from the Director, M. Charles Virolleaud, the following account of work carried out during 1926 by the Department of Antiquities :—

An expedition led by M. Passemard and having for its object the investigation of prehistoric sites, visited the Phoenician coast and the Middle Euphrates valley. In all, more than twenty new sites were discovered and more than two thousand objects of worked flint collected.

The excavation of the archaic cemeteries of southern Phoenicia, begun in 1924, has been continued by the Department of Antiquities. Amongst noteworthy discoveries is a large quantity of pottery of the

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2nd millennium before Christ made at Khirbet Sélim, in the neighbourhood of Tyre, and at Zautar Charkié south of Nabatyé. At Nabatyé itself a rock-cut tomb yielded a bronze arrowhead with a short inscription in alphabetic characters ; it may be assigned to the 10th century before Christ, if not to a more remote period. This document makes a valuable addition to our knowledge of the primitive Phoenician alphabet. It reveals at the same time a new series of texts—that of the archaic inscriptions of southern Phoenicia.

At Byblos, work which had been discontinued since the end of 1924 has been resumed. Equidistant from the two temples there has been laid bare a block of masonry inside which were two niches, each containing a jar. These jars were full of bronze figurines mostly consisting of representations of soldiers armed with a dagger or a pike. A hundred and twenty in all were counted. A fine statuette of serpentine was found intact ; it represents a seated woman, holding in her hands a roll of papyrus, on which are written the following words, in Egyptian :—‘ Royal offering to Hathor, lady of Denderah, who dwells in Kepen,’ that is, in Byblos. An alabaster offering-table bears the name of Pepi II (25th century B.C.) whose name occurs several times elsewhere at Byblos. Amongst the fragments of hieroglyphic inscriptions there is one which appears to go back to an even remoter antiquity ; it is a piece of an alabaster vase on which is preserved the left half of the name of Khufu, the Pharaoh whom the Greeks called Cheops, the builder of the Great Pyramid of Giza, who reigned over Egypt about the 30th century B.C.

In northern Phoenicia, in the neighbourhood of Ma’bed D’amrit, the Marathus of the Roman period, four hundred sculptured fragments have been collected. They belong to the 6th, 5th, or 4th centuries B.C., and fall into several groups, in which Egyptian, Cypriote, and Greek influence successively predominates. Several of them belonged to statuettes of Melcarth, represented standing, the right arm raised and the shoulders covered by a lion-skin.

An expedition consisting of the Reverend Fathers Poidebard and Dunand has explored the region between the Haut-Khabour, the mountains of Mardine and the Irak frontier. All the Tells to the number of about a hundred and fifty, which are scattered over this vast plain, were examined. On the surface of most of them were picked up many flint flakes and a whole industry of obsidian implements, going back to the beginning of neolithic times. Of these Tells the most important seems to be Tell Hamidi, 37 metres high, and equidistant

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from Sindjar and Mardine. It is covered with fragments of thick-sided unornamented vessels. An intact tomb, rectangular in shape and made of brick, contained pottery vessels, some of them with painted decoration.

Finally, the Tell of Nerab, 5 kilometres east of Aleppo—which had already produced two Aramean steles (now in the Louvre)—was methodically excavated by the Reverend Father Carrière, Professor at



the Ecole Biblique at Jerusalem. The upper layer of the Tell yielded a large quantity of Greek pottery (5th century B.C.) Below, at a depth of 7 metres, there was discovered a cemetery of the Persian and Neobabylonian periods. Amongst the objects discovered (which include statuettes of bronze and pottery, bronze and iron weapons, scarabs etc.), one may mention particularly a find of twenty-five

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cuneiform tablets ; they consist of accounts, dating from the reigns of Nebuchadnezzar and Cambyses (604-521 B.C.) This is the first time that documents of this kind have been found in Syria.

The results of the work carried out by the Department of Antiquities in Syria are published either in *Syria*, a Review of Eastern Art and Archaeology, or in the *Bibliothèque archéologique et historique* of the Department. Both are published by Paul Geuthner (12 rue Jacob, Paris). The eighth volume of *Syria* is in preparation, and the ninth volume of the *Bibliothèque* is about to appear.

Since the above was written an important discovery has been made at Zahr-el-Asi, 4 kilometres east of Restan, on the Orontes, in the district of Homs. (*Le Quotidien*, Paris, 7 April 1927). It consists of six fragments of an Assyrian inscription. No details are available at present. It was found by M. le Comte du Mesnil de Buisson. Two Hittite inscriptions are said to have been previously found at Zahr-el-Asi, published by the Reverend Father Ronzevalle.

ROCK PAINTINGS IN SOUTH AFRICA (PLATE IV)

Dr Impey's avowed object in bringing out a short work on Prehistory* is to stimulate further local interest in the Bushman paintings of South Africa. His main thesis is indeed that the paintings were for the most part not made by the Bushmen at all but by an earlier people. It is by no means an easy matter to condense even the parts of the subject relevant to the art into the short compass of a hundred pages and there has resulted, of course, a number of dogmatic statements some of which at any rate will not be accepted by the majority of prehistorians. On the other hand, as Dr Impey chiefly wishes to stir up people around him to study more carefully the extraordinarily interesting series of antiquities lying at their door, this does not perhaps matter so much. There is one point of criticism, however, that might be made. A very great deal of theory has been hung upon the slender thread of a hypothetical Grimaldi race. Verneau, in describing the old woman and the young man from the Grotte des Enfants at Mentone, suggested tentatively that the skeleton showed certain negroid characters. There is surely too little definite evidence as yet to

* S. P. Impey, M.D., J.P., *Origin of the Bushmen and the Rock Paintings of South Africa*. Juta & Co., Ltd., Cape Town and Johannesburg, 1926.

PLATE IV



ROCK-PAINTING AT IRAM, S. RHODESIA
Photograph of full-sized coloured drawing in possession of Dr Impey

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deduce a Grimaldi race wandering all over Africa; Aurignacian and Magdalenian man belonged as a whole to the Neanthropic stock of which Cro-Magnon, Combe-Capelle, etc., are modifications.

But whatever criticisms may be levelled at Dr Impey's book, he can justly point already to a great success. Captain Dimmock, late of the Royal Engineers, now resident in Rhodesia, after reading it, happened to take a ride with a friend, Dr Williams, on his farm, Iram in the Victoria district of southern Rhodesia, about 50 miles from the famous Zimbabwe ruins. Lunching near a cave they noticed that the ceiling was covered with paintings (plate IV), which they at once proceeded to copy. The cave was evidently formed by the roof of a rock shelter fallen in, for the whole is almost filled by a huge boulder with a rounded top which looks as though it would just fit the roof if it were raised. The boulder is higher in front than behind, sloping gradually, its upper surface being parallel to the roof and about three feet from it. Above the middle of this boulder the painting stretches across the roof, and it would appear that the artist must have rested on his back and have painted the picture with a long brush. It was difficult to copy and impossible to photograph without a mirror. Captain Dimmock noted paintings of the normal Bushman type elsewhere in the cave, and there were signs that Bushman paintings had been obliterated to make way for the new figures.

While it is unsafe to dogmatize before visiting the site the reproduction certainly suggests something different from the normal Bushman art, and it would seem to be later in date. It has been suggested that the garments, musical instruments and attitudes of the women are early Egyptian. There is nothing impossible in the suggestion. The country has always been famous for its mineral wealth, and has been visited by traders from time immemorial. It is quite possible that at a very early date some prospectors from the north penetrated inland from the coast to the cave and left their mark therein, stimulated to do so, it may be, by noticing the earlier Bushman decorations. The earlier Bushman art is similar in style to the well-known Spanish (art group II) of late Palaeolithic date, to which it is linked by examples found in caves in Tanganyika, and at the Grotte d'In-Ezzan in the southern Sahara; it was undoubtedly painted by people culturally connected with the Upper Palaeolithic of Europe, although chronologically it may be a great deal more recent. Whether the artists were the direct ancestors of the present day Bushmen of South Africa or, as Dr Impey believes, an earlier pre-Bushman

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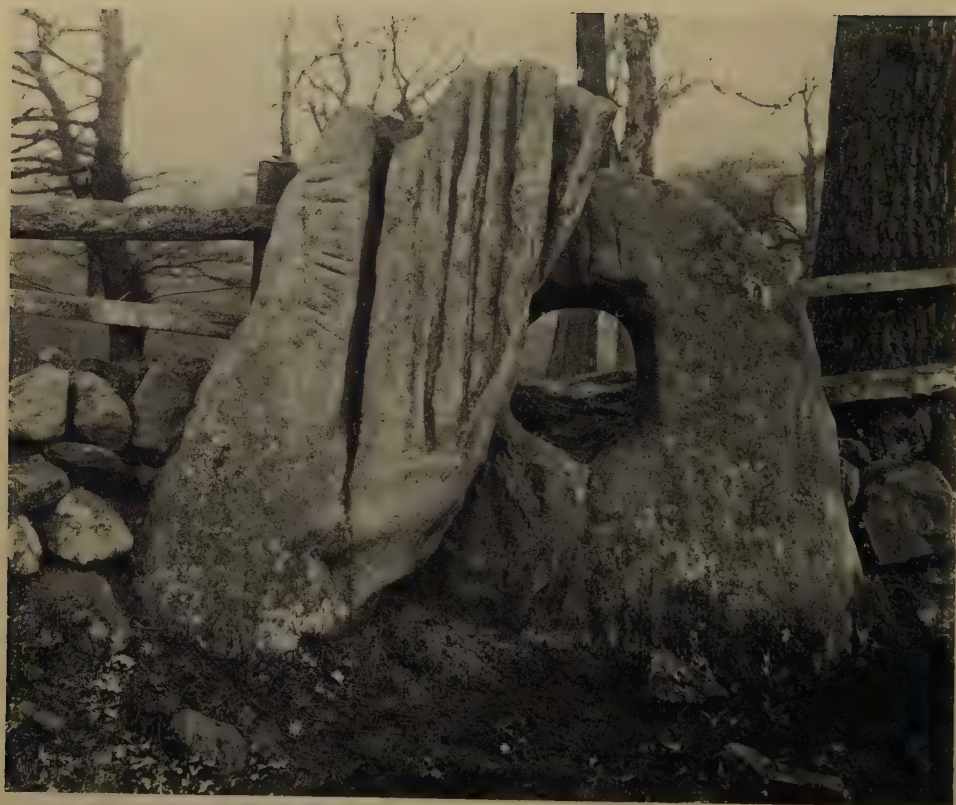
race, is another problem. Doubtless one day further investigation will give us the clue to this question. M. C. BURKITT.

TIMBER CIRCLES

Readers will remember that in the last number of ANTIQUITY was a paper by Mrs Cunnington on the excavation of timber circles in Wiltshire. The site was claimed to be unique. Mr T. Cann Hughes, F.S.A., writes to the Editor calling attention to a wooden circle at Bleasdale near Garstang in Lancashire. Both the writer of the paper and the Editor knew about the Bleasdale circle, the urns from which are exhibited in the Manchester Museum, together with a plan. Although both are circles of timber, there are points of difference. The Bleasdale circles consist of a large outer circle, 150 feet in diameter, and a small inner circle whose diameter is half that of the other. The inner circle is not, however, placed concentrically but near the inner edge of the other. The outer circle consisted simply of a palisade of round logs of oak, the principals being from 2 to 3 feet in diameter and placed at intervals of about 13 feet. There was no evidence of a ditch or bank. The inner circle was formed of an outer ring or vallum about 5 feet wide and 9 inches high. It was composed of clay thrown outwards from the ditch, which was covered at the bottom with a curious flooring of poles placed parallel to one another, and so wedged together as to form a horizontal surface. Within this ditch and bank was a "low mound, now ploughed down, formed also of clay out of the ditch, having a diameter of 54 feet and a height of 2 feet in the centre. . . . In this (mound) lay concealed a circle composed of eleven rounded oak logs, each measuring 30 inches across. These had been let into the ground to a depth of between 3 or 4 feet. They formed a circle of 34 feet in diameter. In the centre of this, in an excavation carried down to a depth of 2 feet below the old ground surface, a group of urns was discovered in a rectangular hole, measuring 2 feet by 3 feet, which had been filled with wood-ashes. The two urns contained calcined human bones ; inside one of them was a third smaller vase. The only other human relic found within this circle was a mass of charcoal 4 feet to the west of the group of urns." (Professor Sir William Boyd Dawkins in *Trans. Lancashire and Cheshire Antiq. Soc.*, vol. xviii, 1901).

The inner circle seems closely to have resembled a disc-barrow. The two urns are of the overhanging rim type assigned to the middle

PLATE V



THE DEVIL'S RING AND FINGER, MUCKLESTONE, STAFFS.

Ph. Thomas Williams

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Bronze Age, and the small cup is an incense cup. A plan of the circles and an illustration of the urns are published with the paper from which the above summary has been compiled.

GOLD HELMET

In Hearne's edition of Leland's *Itinerary* (3rd ed. 1768, i, 30), occurs the following passage :—

“ An old Man of Ancaster . . . told me also that a Plough Man toke up in the Feldes of Harleston [Harlaxton, Lincs.] a 2. Miles from Granteham a stone, under the wich was a potte of Brasse, and an Helmet of Gold, sette with Stones in it, the which was presentid to Catarine Princes Dowager. There were Bedes of Silver in the Potte : and Writings corruptid.”

From Thomas Allen's *History of the County of Lincoln*, 1833 (ii, 315) we learn that the helmet was “ deposited afterwards in the Cabinet of Madrid.” No trace of it can be discovered by those most likely to be familiar with its whereabouts.

The virtual loss of so valuable a find seems almost incredible. After being deposited in a ‘ cabinet ’ it is most unlikely to have been destroyed ; and even if not of gold, it must have been a most valuable discovery. One is tempted to guess that it might have been an enamelled helmet of the Late Celtic period. This might explain the ‘ stones,’ though it could hardly explain the ‘ writings corruptid ’ and the ‘ bedes of silver,’ unless they were British coins. Perhaps, if publicity is given to this note, the present resting-place of the helmet may be discovered. We would suggest to our readers in the Harlaxton district and in Spain that they might follow up the clues.

THE DEVIL'S RING AND FINGER (PLATES V-VI)

Mr R. Nicholls has contributed the illustration (plate v) which is reproduced, and a note on the monument. It is situated in the village of Mucklestone, in north-west Staffordshire, and the name seems to have some relation to the stones. About a mile away, at Norton in Hales, are some remains which undoubtedly once formed part of a burial-chamber. In the river Tern near by a prehistoric boat was found many years ago.

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The holed stone is an excellent example of a type which is rare in this country, though common in the burial-chambers of the Paris basin. The principal British examples recorded are the Men-an-Tol in Madron parish near Penzance, and the Tolvan (plate VI) between Gweek and Wendron near Helston. References to others will be found in Kendrick's *Axe Age*, pages 42 ff, and a full account of them is given in the third chapter. There appear to be two kinds of 'port-holes,'—one large enough for admittance and the other far too small. It is suggested that the latter may have had a magical significance as a 'thoroughfare for souls' of the departed, or for the insertion of offerings. In either case the holed stones are certainly associated with burial-chambers; and it seems probable that the Devil's Ring may once have formed a part of such, though now the rest of the chamber (and covering mound, if such existed) is absent.

The vertical grooves in the upright here figured, resemble those of the Queen Stone near Symonds Yat (see *Long Barrows and Stone Circles of the Cotswolds*, pp. 206–7). These are probably caused by rain channeling strata of unequal hardness. Similar grooves are to be seen on the Devil's Arrows near Boroughbridge in Yorkshire, where the height precludes an artificial origin.

The group of monuments in this district is geographically interesting, for it forms a possible link between the megalithic regions of Derbyshire and North Wales. Those which survive are few in number and little known—neither of those referred to in the first paragraph were marked on the Ordnance Maps until recently. The district is one which has long been extensively cultivated, and it may once have been as rich in megalithic remains as the place-names suggest. Notes about any others which may have escaped the attention of the Ordnance Surveyors will be welcomed by the Editor.

PLATE VI



THE TOLVAN, NEAR HELSTON, CORNWALL
Ph. A. H. Hawke, Helston

Forthcoming Excavations

There is little to add to the information already published in our first number. Mr S. N. Miller will continue his excavations at York in September, continuing for at least a month. A report on last year's work will appear shortly. Dr Cyril Fox, Director of the National Museum of Wales, hopes to carry on his survey of Offa's Dyke, probably during July, starting at Bersham in Denbighshire and working southwards. The Carmarthenshire Antiquarian Society hopes to continue the excavation of the nave of the Cistercian Abbey of Whitland (between Narberth and St. Clears). Its Director, Mr Ernest V. Collier, will be in charge, as in 1926. An account of last season's work on the east end and transepts, together with a plan of the Abbey, based on the results of the examination by spade, appears in part 48 of the Society's Transactions.

It would add to the value of this section of ANTIQUITY if those of our readers, in any part of the world, who are in charge of excavation work, would send us the briefest occasional notes on their future plans ; adding (when possible) where the accounts will be published. Site and date will be enough.

Recent Museum Accessions

It has been suggested that occasional notes on recent important additions to museums would be of value to students. Such notes naturally cannot attempt to deal with museums outside the British Isles. For the following information we have to thank the authorities concerned.

BRITISH MUSEUM

Full information about important accessions will be found in the *British Museum Quarterly*, published by the Trustees ; this is an admirably printed and illustrated publication the first number of which appeared last year. (For the information of those wishing to subscribe

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it may be added that a sum of two pounds, sent to the Secretary of the British Museum, ensures the receipt of all numbers issued for five years, beginning with number one, or an annual subscription of eight shillings can be made).

No. 1 contains, amongst other notes, a description of a statuette of Socrates found at Alexandria (see plate). "In the face of this figure we seem to have a truer and more life-like presentment of Socrates than any of the previously known busts had given us." It is to be regarded as "the earliest known representation of the philosopher, dating from about the end of the fourth century B.C." We may congratulate the Museum on acquiring what is most certainly "a great and beautiful work of art." A photograph of the statuette appears as the frontispiece, and is here reproduced, by kind permission.

The feature of No. 2 is undoubtedly the Sumerian sculpture illustrated on plates XIX–XXI. The most striking object is a head from a marble statuette of a woman which, as Dr Hall justly claims, should rank among the most beautiful examples of Sumerian art. It is illustrated on plate XXI (a) of the number. By way of contrast from an artistic point of view may be cited the Persian lion (in outline) on plate XXIV.

No. 3 contains a report on excavations at Lubaantun by Mr T. A. Joyce; and some air-photographs of Ur (plates XLIV and XLV). As so often happens, the striking feature of these air-photographs is a purely irrelevant one—the spoil-dumps! The photographs are interesting because they show both the plan and the present state of excavations—what has been accomplished and what remains to be uncovered.

No. 4, the current number, contains (as frontispiece) a restoration of a Sumerian relief in copper, dated by Dr Hall about 3000 B.C. It was one of his own discoveries at al'Ubaid in 1919. The group is of the greatest interest but without much artistic merit. Some early (? 10th century) chess-men found at Witchampton, Dorset, are illustrated on plate XLIX. They have been placed on permanent loan in the British Museum by Mrs McGeagh. Other notes describe copies of Egyptian wall-paintings made by Mrs Nina de Garis Davies; and Carthaginian cinerary urns.



STATUETTE OF SOCRATES IN BRITISH MUSEUM

Reproduced from No. 1 of the "British Museum Quarterly," by kind permission of the Director

facing p. 232

NOTES AND NEWS

In addition to the above the following list has kindly been supplied by the authorities concerned :—

DEPARTMENT OF EGYPTIAN AND ASSYRIAN ANTIQUITIES

Flint implements of the Fayûm Culture, discovered by Miss Caton Thompson, 1924-6.

Series of *dated* groups of beads from the Old to the New Kingdoms found at Abydos, 1925-6.

DEPARTMENT OF BRITISH AND MEDIEVAL ANTIQUITIES

Hallstatt and La Tène pottery from Park Brow, Cissbury (excavated by G. R. Wolseley, Esq.) and from Margate (excavated by the late Dr A. W. Rowe).

Pottery, stone implements and querns from stone circle on Ile d'Er Lanic, Golfe de Morbihan.

Large pottery vessel with 8 socketed bronze axes (out of an original 170) and bronze cake found inside it ; another large vessel and 93 socketed bronze axes found inside ; both from Brittany.

Pottery from site of Romano-British kiln near Farnham, Surrey (excavated by Major Wade).

DEPARTMENT OF CERAMICS AND ETHNOGRAPHY

Stone implements from Jos, Bauchi Province, northern Nigeria (collected by A. Stanley Williams and others), and from various other districts in Nigeria ; also from the Tabel Belat, southern Morocco (collected by Professor C. G. Seligman). Others, including ' pygmies ' from vicinity of Newcastle, New South Wales (collected by D. F. Cooksey).

ASHMOLEAN MUSEUM, OXFORD

The Report of the Keeper for 1926 contains references to many accessions of great interest. Amongst others are " about 270 things from Kish and Jemd en-Nasr (Iraq) ; two large tomb-groups and many detached objects from the Egypt Exploration Society's excavations at Abydos "; objects from the Fayûm excavations and from northern France.

The objects from Kish and Jemd en-Nasr represent Oxford's share of the spoils of the joint Oxford and Chicago Field Museum's

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excavations. "The chief feature of our allotment consists unquestionably in the tablets. They form the largest collection of early Sumerian pictographic tablets known up to the present, and fortunately many of them are in excellent preservation. They still await decipherment."

The Fayûm objects (excavated by Miss Caton Thompson under the auspices of the British School in Egypt) "consist of stone implements and weapons (rubbers, scrapers, hammers, mullers, celts, cutting-tools, knives and arrowheads) a harpoon and an arrowhead in bone, and some sherds. The 'Solutrean' attribution of these objects is a matter of dispute, some authorities regarding them as quite late Neolithic.

The additions to the West European section are numerous and important. Some of the best were obtained from the collection of the Comte Aveneau de la Grancière. Amongst these is a "tomb-group. . . . from the tumulus of Saint-Fiacre, Melrand, Canton de Baud, Morbihan, excavated in 1897 (Bull. Soc. Polym. Morbihan, Nov. 1897). The find contains numerous bronze implements, namely, two flat axes with wide-splayed blades, and several daggers or kindred weapons, some sadly deteriorated by oxidization. One has a bronze haft and pommel, while another had originally a wooden handle studded with minute gold pins, as in specimens from Wiltshire [see Colt Hoare, *Ancient Wilts*, 1812, i, 203, plate xxvi; description of the Bush Barrow near Stonehenge. The gold objects from this barrow are now in the British Museum on loan; but electrotypes of them, together with the bronze and other objects from the barrow, are in the museum of the Wiltshire Archaeological Society at Devizes]. Some of these pins are preserved in a fragment of wood, and others are loose. Other implements were determined, from the direction of the grain of the wood present on them when found, to be halberds. For the history of commerce along the Atlantic coast an oblong amber plaque-bead, nearly $2\frac{1}{2}$ inches long, and fragments of a vase (?) of silver (not bronze as stated in the original account) are both significant and suggestive." A hoard of five looped and socketed bronze axes, found at Treméoc, Finisterre, in 1893, contained one of Cornish type which is "unquestionably of British fabric." Breton axes have been found in England, and it is interesting to see the evidence of exchange from across the channel.

The Assistant-Keeper, Mr E. Thurlow Leeds, F.S.A., has added the objects found by him on the site of a Saxon village at Sutton Courtney, Berks. "A second report on these excavations will appear in the next volume of *Archaeologia*."

Reviews

AN INVENTORY OF THE HISTORICAL MONUMENTS IN HUNTINGDONSHIRE. (Royal Commission on the Ancient and Historical Monuments in England). H.M. Stationery Office, 1926. 35s.

THE VICTORIA COUNTY HISTORY OF THE COUNTY OF HUNTINGDON. Edited by WILLIAM PAGE, F.S.A., and GRANVILLE PROBY, M.A., F.S.A., assisted by H. E. NORRIS, F.Z.S. The St. Catherine Press, Stamford street, Waterloo, S.E. 1926. 63s.

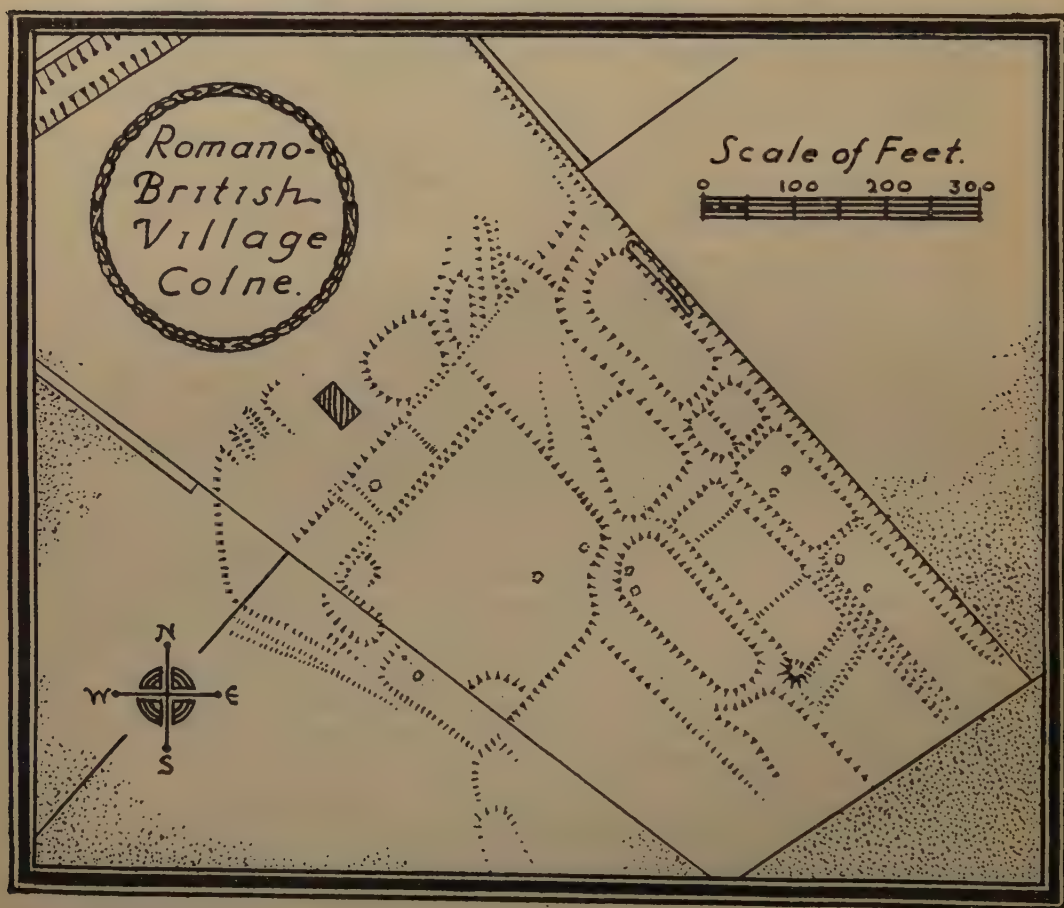
Huntingdonshire has been fortunate in the splendid volumes recently devoted to it. In addition to the two now under review, the English Place-name Society has issued (as their third volume) a very full and, of course, scholarly account of the place-names of the county. The harvest is abundant and proves what interest even a dull subject—and Huntingdonshire as a county *is* dull—may excite when properly handled.

The standard of the Royal Commission is a high one. It represents perhaps the high watermark of scientific archaeological survey, and proves, if proof were needed, that English archaeologists need not go abroad to learn their job. The essentials—such as meticulous accuracy, judgment, and technical skill—may be acquired in our own country. The volume before us proves further that black and white plans and drawings may be both useful and beautiful. (We purposely exclude the coloured index-map which is neither). The little plans which occur on almost every one of the 310 pages of the Inventory are really superb. They are not dully mechanical but obviously drawn with enjoyment; consequently they please the reader. They will continue to please readers when the villages they represent have ceased to do so; and when the ancient monuments they record are hidden (as is the most intimate sanctuary of Avebury) by ramshackle garages. The introduction contains an admirable summary, by Dr R. E. M. Wheeler, of Romano-British life in the county. There are no less than 166 half-tone plates, all very well printed from excellent photographs specially taken for the Commission.

The two illustrations which we reproduce here (by kind permission of H.M. Stationery Office whose courtesy in lending us the blocks we wish to acknowledge) will give our readers some idea of the general standard of excellence attained. The Romano-British village at Colne is remarkably unlike the sprawling, irregular settlements of Wessex. It reflects a more orderly mind and might even suggest that the Roman discipline had influenced the designer. (The portion shown on the plan is probably only a fragment, preserved from cultivation by a miracle). There must be innumerable similar sites awaiting discovery by observation from the air; for ploughing and sowing, while they may level the banks, must assist in revealing the plan from above. Here is a fascinating pursuit for the amateur airman in search of something both old and new. The region is rather remote from the photographic activities of the Royal Air Force; and it is virgin ground.

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The star-shaped earthwork at Horsey Hill is that *rara avis*—a genuine Cromwellian earthwork. So many prehistoric hill-forts have wrongly been named after Cromwell by rustic tradition that it is refreshing to find one such at last. Curiously enough, but little seems to be known about it, and neither it, nor the other at Earith, have been associated locally with Cromwell's name. Both are in good condition and will henceforth be protected from destruction.



The VICTORIA COUNTY HISTORY is an undertaking which is not in any way assisted by the Government. Its aim is to codify all that is known about each county, five or six volumes being devoted to each. It has become a national institution, worthy to rank with the Dictionary of National Biography, the Oxford English Dictionary and the volumes of the Rolls Series. There are special articles on geology, archaeology, natural history, sport and so forth, the later volumes being devoted to topographical descriptions

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of each parish with their medieval history, fully documented. The present volume maintains the high standard of the past, and even raises it. The article on Early Man, by Dr Cyril Fox, is not merely a dry catalogue of finds, but also what the title implies—an account of Early Man. (The corresponding articles in earlier volumes have not always achieved this most necessary combination). Perhaps the most welcome innovation is the successful attempt to show the natural vegetation of the county, on the maps of 'Early Man,' Romano-British remains and Earthworks. Forest land is coloured dark green, and covers by far the greatest area; fen or marsh is shown light green; and open country is left white. Such a restoration is perfectly legitimate and helps materially to explain the distribution of 'human' remains. It is to be hoped that the practice will be continued; and if we might, in anticipation of this, offer a suggestion, it would be that other types of vegetation should be added, if and when required. It would be desirable for instance to distinguish, say in Kent, between the dense and often waterlogged, woodlands of the Eocene and Wealden Clays and the less heavily timbered bush-country of the uplands capped with clay and loam. A subdivision of 'open country' into barren, gravelly, or sandy heaths and grassy (limestone) downs would also be useful. (These are not criticisms of the present volume, but suggestions for future ones).

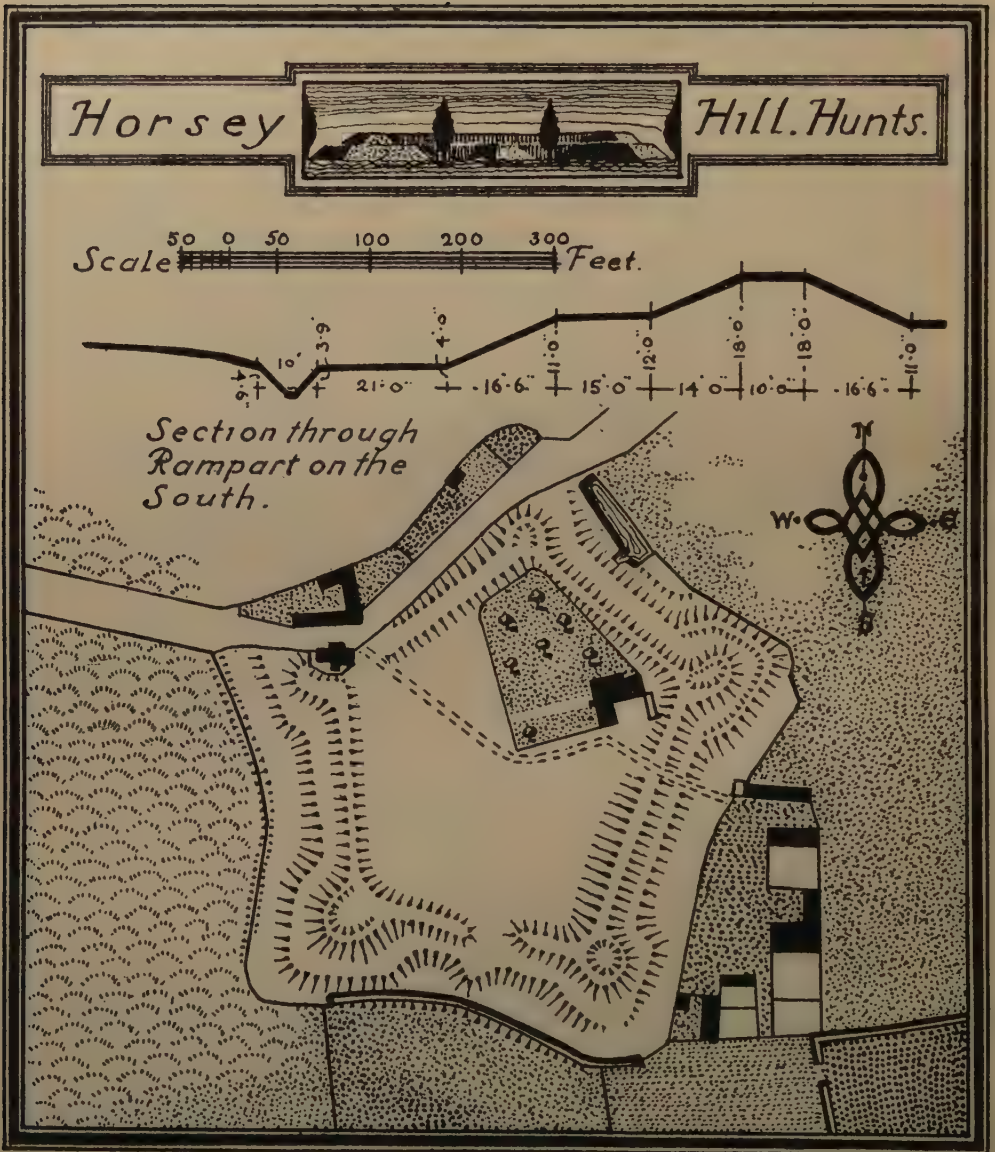
In pre-Roman times Huntingdonshire was almost completely covered by dense forest and fen, the only open country being the sandy and gravelly heaths bordering the Ouse and its tributaries. Consequently it has yielded few remains earlier than the middle of the Bronze Age; and we may suppose that throughout prehistoric times, and perhaps even after them, wandering bands of hunters frequented the forest hinterland. They have left their flint arrowheads behind them, and but little else. The dead level of barbarism probably survived until the Saxon invaders had consolidated their settlements.

There are some remarks, however, which are open to criticism. The statement that "the climatic conditions during the Neolithic Age were much the same as exist to-day, possibly with rather heavier rainfall" should have been omitted. It is in direct opposition to the views of Mr C. E. P. Brooks, the leading British authority on climates of the past: according to him the period 3000–1800 B.C. (approximately) was *drier* than the present. However, there is little else to criticize, and much to praise, in Dr Fox's article, and we hope he will write many other "Early Man" articles.

We have devoted so much space to the prehistoric period, that our remarks on the other sections must be briefer than the subjects deserve. Miss Taylor's article on "Romano-British Remains" (over 50 pages—a monograph in itself) maintains the standard of scholarship and completeness set by the late Professor Haverfield. The description of the Nene Valley potteries, and the reproduction of Artis's plans, is a valuable feature. The "Ancient Earthworks" article, by Mr S. Inskip Ladds, is mainly concerned with homestead moats, whose distribution is an interesting commentary on that of the Roman and pre-Roman sites. There are no hill-top camps, because there are practically no hill-tops! To do justice to these various articles would require a separate review for each and we must apologize to the authors for the very inadequate treatment of their labours.

It would be a convenience if the name of the writer could be given at the head of the article for which he is responsible. It is tiresome to be obliged to refer to the index. We would also suggest that the index would be easier to use if the main subjects (such as 'Natural History,' 'Religious Houses') were printed in bolder type than their subdivisions. Indenting, by itself, is confusing when the list of subheadings is so long.

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The geological map shows the solid geology ; a drift map should have been added—or substituted—and would have been found useful by the reader in connexion with the prehistoric vegetation-maps.

We cannot conclude without congratulating the editors and readers of these volumes upon a splendid achievement, carried out under difficulties.

A HISTORY OF THE ANCIENT WORLD. Vol 1. The Orient and Greece.
By M. ROSTOVITZEFF, D.LITT. Translated by J. D. Duff. Oxford University Press, 1926. 21s.

Professor Rostovtzeff himself defines the aim of his book in its preface, where he says of it, " My chief object was to collect therein those fundamental ideas and views, concerning the main problems of ancient history, which I had gained from long years spent on the study of the subject. . . I publish the book without scientific apparatus, endeavouring merely to make the exposition as simple and clear as possible."

It may be said at once that Professor Rostovtzeff succeeds completely in his aim. Every one of the four hundred odd pages of this first volume of his book is written with that sobriety and lucidity which comes only from complete mastery of a subject. The casual reader, indeed, carried along by the simplicity of the style and the apparent ease with which the whole panorama of ancient history is kept before his eyes, might well be forgiven for underestimating Professor Rostovtzeff's achievement. That achievement is, in fact, one far from common in this, or indeed, in any day. It is all too seldom that a man of his deep and wide knowledge, largely gained by independent research, is capable of writing a book like this, simple enough for the general reader to understand and enjoy, and yet free from the slightest taint of sensationalism. He has none of those intellectual axes which are so often ground before the eyes of the public, nor does he bestride any of those fantastic hobby horses whose antics so often bring their riders to grief. But for that large public, which one must hope to exist, formed of intelligent and educated persons, who wish for an unprejudiced yet authoritative account of the outlines of ancient history, this is undoubtedly the book.

The value of the volume is greatly enhanced by the very numerous and excellent illustrations, which, besides their own intrinsic interest, do really illustrate the text. The format of the book is, indeed, entirely good, and it has that rarity, an adequate index, besides useful maps and a bibliography. One is beginning rather to take all this for granted in books issuing from the Oxford Press, and the only fault that one can find is that there is no indication of the size of the objects illustrated, an omission which is particularly tiresome where so many of them are of sculpture.

Finally a word should be said for the translation by Mr J. D. Duff, which is so good that no one would imagine it was a translation at all, were the fact not advertised on the title-page.
E. G. WITHYCOMBE.

THE DIFFUSION OF CULTURE. By R. R. MARETT, M.A., D.SC. ; being the Frazer Lecture in Social Anthropology. Cambridge University Press. 1927. 38 pp. 1s. 6d.

Dr Marett used the opportunity presented by this lecture to champion Tylor and Sir James Frazer against the attacks of Professor Elliot Smith and his followers. We are inclined to agree with the suggestion that the reputations of these great men are " too

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well established to need vindication against criticism perhaps too perverse to call for serious notice." But such attacks need refuting from time to time, and Dr Marett's lecture makes excellent reading. Even an empty match-box serves to strike a match upon ; and the wanderings of the " Children of the Sun " have at any rate achieved this negative result. The serious student of archaeology will be amused by one sentence which we cannot refrain from quoting :—" If a man [Professor Elliot Smith] writes deliberately : ' There can no longer be any doubt that the essential elements of civilization did really originate in Egypt,' what is the use of adding by way of an afterthought : ' it is my duty to inform the reader in the most specific way that I lay no claim to the right to express an opinion on archaeological matters ' ?" (p. 16). The value of the first statement may be inferred from the second.

URGESCHICHTE DER NAHRUNG. By OSWALD MENGHIN. Reprinted from the *Lexikon der Ernährungskunde*, pp. 1024-47. Julius Springer, Vienna. 1926.

It is a pity that the author of this article has felt himself restricted to prehistoric Europe and excluded any examination of the evidence from the Ancient East. The result is inevitably a very one-sided picture of the earliest basis of human life. The great advances in food-getting—domestication of animals, cultivation of plants and the invention of the plough—which alone made civilization possible, were made in Egypt or Mesopotamia or some adjacent region, as Menghin himself is disposed to admit at least in the case of the plough. Our early forerunners of the Old Stone Age in Europe were merely food-gatherers at the mercy of their environment ; for Piette's doctrine of the cultivation of grain in southern France in Upper Palaeolithic times, though accepted in this paper, rests upon as flimsy foundations as his theory of the " semi-domestication " of animals at the same date, here very properly rejected.

The earliest grain cultivated in Europe was, according to Menghin, barley, which has been found wild in Hither Asia and North Africa. Next would come the wheats, but the priority of barley culture even in the Ancient East is very uncertain in view of the discoveries at Anau in Turkestan and, more recently, at Kish in Mesopotamia and in the Fayum, and is unsupported by any evidence as far as Europe is concerned. Wheats, like barley, do not occur wild in Europe north of the Balkans, and must therefore have been introduced from the Eastern Mediterranean area in the first instance.

Rye would have been cultivated first in the Iron Age according to Menghin. Actually Miss Kozłowska has found the grain in a neolithic settlement in Poland.

The idea of domesticating animals would have arisen among the nomads of Upper Asia but most animals bred in Europe would be of local origin. In particular the earliest domestic swine is said to be descended from the European wild boar and not, as is usually held, from the Asiatic variety. In any case the limitations on the author's outlook have excluded all reference to Anau in Turkestan. Yet at no other site are the various stages in the domestication of animals so clear, thanks to an admirable study of the bones from four successive settlements.

Despite these and other limitations Professor Menghin has given a very valuable summary of the way in which our ancestors obtained and prepared their food in prehistoric times.

V. GORDON CHILDE.

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LA ESFINGE INDIANA. By J. IMBELLONI. Buenos Aires : Pedro Garcia. 1926. pp. 396.

This is an important work dealing with American origins ; because of its general treatment and discussions on method it is of great interest to others besides Americanists. The author is a university professor in Argentina, who has already written much on physical anthropology and early culture.

Part I (" The Heroic Age ") deals with the 400 years' history of the problem, and the varied solutions that have been put forward. Then, after a particular consideration of two of the latest theories (Ricci's migration from America to Chaldea, and the " Manchester School's " diffusion from Egypt) the author in part IV (" First Light in the Labyrinth ") draws the first outlines of a solution founded on our knowledge to-day in ethnology and linguistics.

The different chapters are clearly written, though perhaps the work as a whole might have been closer knitted, and a little more tidily arranged. " Reader, if you are a believer in the Aristotelian unity," Professor Imbelloni says in his preface, " this book is not for you ;" but he points out that this springs from the very nature of the subject and the way it has been treated by his forerunners. Be that as it may, he wields a keen and sure logic that makes the reading an intellectual pleasure throughout.

The history of the theories on American origins passes in a ghostly procession before our eyes in part I, and many of the ghosts still walk. Europe, Africa, Asia, Oceania—the home of the American has been placed in all these ; imaginary continents have been created for the same end ; while some have held him to be autochthonic. Then, not long since, Professor Ricci, of Argentina (stung perhaps by the many wild theories in the opposite sense) put forward the theory that " the civilization of Central Asia (*sic*) as built up by the Sumerians, is an offshoot of the prehistoric American civilization." Tiahuanaco, whose ruins (" a wonderful thing, which all should see," as the old Spanish chronicler says) brood over Lake Titicaca high up in the Andes, is given as the starting point for this transmission across 9000 miles of land and sea. For this theory, vast chronological figures too are needed, and Ricci has to accept the wild theories of Posnansky. Imbelloni makes a very searching analysis of the arguments, whose effect was to set Tiahuanaco aside from the general picture of prehistoric culture, with an extravagantly lofty and ancient culture of its own (Posnansky puts the latest buildings there before 10000 B.C.) He utterly demolishes the geological, climatic, and astronomical arguments that have been used (he finds indeed that a correct calculation from one of Posnansky's data would give 1200 A.D. as the date for one of the buildings !) He holds Tiahuanaco to have been not a town, but a sanctuary (left, moreover, uncompleted) like Cuzumel in Yucatan, and of comparatively late date. He shows, too, that Ricci's linguistic and other arguments cannot stand. Imbelloni next comes to what he calls the " Manchester School," with its " Egyptian obsession." He deals, it is to be noted however, only with the works of Professor Jackson and Professor Elliot Smith, of which he makes a very careful analysis in part III, ending in thorough disagreement with them. " Both in this question, as in that of the shells," he remarks on page 201, " and in others we have discussed or shall presently discuss, it is clear that the Manchester school either makes a wrong (*peca*) choice of data and exaggerates their value, or else applies a wholly inadequate method to the facts and observations collected." He might even say that it is *pecca fortiter sed crede fortius*. He grants however that " no doubt in the infancy of the science this movement had its half-hour as a stimulus to curiosity."

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Having dealt with the earlier theories, Imbelloni in part IV sets forth in outline his own theory of American origins. Here and elsewhere he makes valuable contributions, too, to questions of method in the cultural sciences. He is of the sound view that "dependence and convergence can live side by side without any disagreement, in spite of the irreconcilable theorists" (p. 295). He gives two canons for the method of diffusion: (1) not to depend on single analogies; (2) to reject all proof not based on correspondence in ethnology, archaeology, and linguistics alike (p. 282). Of the American problem he remarks that before looking for relations far away we should seek all possible intermediate forms within the American area.

As the result of excavations in which he took part at Miramar in 1924 he says that "he has no doubt left as to the presence of man in America from the lower Quaternary, that is, contemporaneously with the oldest human traces found in Europe" (p. 263). So that we need not, he says, at present go further back to ask whether the American is autochthonic or not; though he agrees with Biasutti that he was not a homogeneous type. This early American man would seem, according to him, to have died out or been overlaid by the immigrants from the west. For it is here that we have the main thesis of this work:—that the American peoples and cultures are of Oceanic origin. Imbelloni is in agreement with Rivet, who, starting from a correspondence in a fairly large set of words in each case, posits an identity between the North American Hoka and the Melaneso-Polynesian linguistic groups, and between the South American Chon and the common element in the Australian group. With Father Schmidt, we can hardly do more than take up an attitude of reserve towards such a theory in the present state of our knowledge, particularly that of the Australian and the South American languages. Imbelloni, however, mindful of the canons of method laid down by him deals with the considerable common elements to be found in the anthropology and culture of the groups. He declares (p. 303) that "the *whole* heritage of the American stands related indirectly or directly to that of the Oceanic man." (Thus, incidentally the Polynesians may be said to have reached the aeneolithic stage in South America). As to the autochthonic quaternary man, his "contribution. . . may be considered as nothing at all." America would have been settled from west to east through the Pacific gateways; the "unhistoric" peoples of America, like those of the higher cultures, are continuers of a culture from the Pacific, the Polynesians being the latest-comers (p. 324). The cultures of Mexico and Peru are "American" in the same way that the Greek culture was developed by Aryan Hellenes on a Mediterranean basis (p. 330). Easter Island is the last link in a long chain; and Imbelloni mentions recent discoveries at Ancachs in Peru (stone statues), and at Llolleo in Chile (obsidian implements) of markedly Rapanui character (pp. 241, 281). It is to be noted that Imbelloni does not follow Rivet in the latter's complicated later hypothesis of additional migrations from the Amazon valley into the Andean region. So far, then, the mainstay of the Oceanic theory lies in linguistics. In the appendix Senor Palavecino gives 65 words from the Kechua which are practically identical in every way with Maori words, and support Imbelloni's theory that the last of the Oceanic immigrations was Polynesian. Father Schmidt thinks that Kechua may have had Ecuador for its original home, and came later than Aymara into the Titicaca area, there having been there earlier than either of them an Arawak population of hunters and fishers. The problem, of course, is highly complicated, and one of the first needs is intensified work on the South American languages. Palavecino says that he has found that over 30 per cent. of Kechua words are Polynesian in phonology, while what changes there are in meaning can be explained by certain well-known laws. The

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suggestion may be made here that, for comparing the word-stock of two languages, the argument becomes much more cogent if the words are first sorted into coherent groups (as the whole and its parts, classes of food-plants, and so on). Palavecino's list is simply in alphabetical order.

In a concluding section Imbelloni seeks to bring greater precision into the Kechua Polynesian relation: Kechua stands nearest to southern Polynesia (keeping *k*, and preferring *r* to *l*), and has just such variations as any other Polynesian dialect. Polynesian is itself a superposition, he points out, in the Oceanic area. The rightful criticism has been made on his treatment here that he adds no weight to his argument by bringing comparisons from various parts of Polynesia, the linguistic uniformity of the area being well known to philologists. He promises to carry his investigations into the "tangled skein of the Melanesian and Malay elements," and Senor Palavecino is examining the Australian element in the South American languages. They, or someone for them, will, it is to be hoped, deal with the South American languages, where so much waits to be done, and which are at their door.

The book has an excellent collection of apposite illustrations and maps, and most useful bibliographies to the chapters. It is a valuable work which does honour to Argentine science; and we await with the greatest interest the supplementary volume promised us by the author, in which, too, he will deal with criticisms. G. C. WHEELER.

MAYA AND MEXICAN ART. By THOMAS ATHOL JOYCE. *The Studio*. 1926. 10s. 6d.

The title and author of this volume are, in themselves, sufficient to make discerning persons resolved to possess it. Nor would they be disappointed. Mr Joyce's chapters on the various branches of Maya and Aztec art are filled with information and appreciation and the marginal references render the reading of the book easily compatible with looking at the illustrations. These illustrations are worth volumes of exposition, for the purpose of giving some idea of that amazing civilization and, especially when looking at the reproductions of sculpture, it is almost impossible to believe that these masterpieces, for such they are, were executed by men living for all practical purposes, in the Stone Age. The Maya sculpture, with its wonderful design and subtle modelling, can only be compared with that of Assyria, to which, indeed, it occasionally bears an extraordinary likeness. The two figures of priests on the tablet illustrated on page 57, are good examples of this resemblance. In a way, however, the examples of Aztec sculpture are even more remarkable than the Maya. Nothing like those figures and masks, cut from the hardest stones, has ever been achieved, before or since, though they do bear a striking resemblance to the most modern works of art. Attention should specially be drawn to the stone figure on page 83, the obsidian mask on page 85, and the quartz mask on page 91. These could bear comparison with any of the masterpieces of the Old World, so far as powerfulness and haunting grimness are concerned.

The sections devoted to architecture, pottery and drawing are only less absorbing than that on sculpture and are almost equally interesting as examples of what can be done by people living in a primitive state, so far as their knowledge of metals goes.

It should be added that practically all the objects illustrated are in the British Museum, and it cannot but be a source of satisfaction to reflect that in British Honduras is one of the areas best fitted for research into Maya civilization and that British anthropologists, of whom Mr Joyce is of course one of the foremost, have been amongst the most eager in that research.

E. G. WITCOMBE.

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THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE. Vol.
LVI, July-December 1926. 158.

T. A. Joyce gives a very interesting and well illustrated report on the first year's investigation of Lubaantun in British Honduras. The conclusions he draws are that Lubaantun differs from all known Maya sites by reason of certain architectural peculiarities and the absence of ornamental or hieroglyphic sculpture, and that it was occupied for a long period, from a date anterior to that of the Early Empire up to late Maya times and possibly even after the discovery of America. An account of the pre-Columbian mounds on the Tampico region of Mexico by John M. Muir shows that they contain superimposed cement floors (some of which are decorated) and that they functioned as foundations for dwellings. Richard C. E. Long writes on the Zouche Codex, and S. B. Leakey gives a new classification of the bows and arrows of Africa with some excellent distribution maps, and we are glad to hear that he intends to work the subject out further. Miss E. W. Gardner in her paper on the recent geology of the northern Fayum Desert shows that there was an early high-level lake filling up the natural depression to at least 222 feet, and a later lake which reached its maximum level of 205 feet before the advent of the Fayum people. In a lucid paper on the neolithic industry of the northern Fayum Desert Miss Caton-Thompson brings forward what appears to be irrefragable evidence against the Solutrean dating of that culture. She places it at the end of the Neolithic period and compares it with the Badarian and Nubian groups. Sir W. Flinders Petrie in a short paper makes some critical observations on the reports of Miss Gardner and of Miss Caton-Thompson. An article by A. P. Lyons on the customs and habits of the Gogodara tribe of western Papua contains some good illustrations of clan designs on paddles and canoes. E. S. Thomas compares the drawings from ancient Egypt, Libya and the south Spanish caves, and suggests that the rock signs of ancient Spain and Libya may prove to be pictographs and not mere scribbles or decorations. There are some notes on the coiffure of the Litang women by J. Houston Edgar. The last article, but by no means the least important, is one on the archaeology of Gorgona Island, South America, by James Hornell of the St. George expedition to the South Seas, in 1924. The description of the stone implements, pottery and sculptured boulders whets our appetite to hear still more of this very interesting culture.

R. C. C. CLAY.

MAORI STOREHOUSES AND KINDRED STRUCTURES. By ELSDON BEST. Dominion Museum Bulletin, no. 5. Wellington, N.Z. 1916. pp. viii, 107. THE MAORI CANOE. By ELSDON BEST. Dominion Museum Bulletin, no. 7, Wellington, N.Z. 1925. pp. iv, 312. THE MAORI AS HE WAS. By ELSDON BEST. New Zealand Board of Science and Art Manual no. 4. Wellington, N.Z. 1924. pp. xv, 280.

These three works by the eminent New Zealand scholar Mr Elsdon Best are of anthropological rather than archaeological interest, though since they deal in intimate fashion with certain phases of the life of a neolithic people they may throw some interesting sidelights on general conditions in prehistoric times.

The first BULLETIN describes in detail the various methods of storing food supplies practised by the Maori—on stages, in huts on posts, underground pits, etc. The description and sketches of the bottle-necked underground reservoirs within the scarped hill forts for the storing of water in time of siege is a point of some interest for comparison, as is also that of the storehouses built out in piles into the lake.

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THE MAORI CANOE is a valuable monograph, well illustrated and full of information on the various types of craft possessed by the natives, their building, fitting out, ornament, use, and navigation. Much information is also given on the canoes of other island groups in the Pacific, with notes from the early voyagers' accounts. *Inter alia*, the use of stone tools in wood-working is discussed. The skill and knowledge of scientific principles on the part of primitive man is made clear by the accounts of the construction and voyaging of the old sea-going canoe.

THE MAORI AS HE WAS is a very useful manual for those who wish to learn something of the arts, crafts and institutions of the native of neolithic days. For this the abundant illustrations of tools, weapons, ornaments and other aspects of social and material culture provide an effective background.

RAYMOND FIRTH.

ROYAL COMMISSION ON THE ANCIENT AND HISTORICAL MONUMENTS AND CONSTRUCTIONS IN WALES AND MONMOUTHSHIRE :
VII, COUNTY OF PEMBROKE. London : H.M. Stationery Office. 1925. £3 3s.

It is a mystery to the layman why the English, Scottish and Welsh Historical Monuments Commissions should each have chosen a different (and even a variable) format for their volumes ; a greater mystery why the Welsh Commission should have chosen an unwieldy foolscap size which fits no normal bookshelf, fails to stand up if of modest width and, if of the size of the present volume, is an awesome burden to the reader. "Pembrokeshire" runs to 490 of these foolscap pages, weighs over six pounds, and costs the unwary speculator three guineas. These formidable qualities at least ensure that, for good or ill, the volume shall not escape attention.

The work of production has been carried out by the Stationery Office with efficiency ; the type is satisfactory and the illustrations are for the most part technically good. Of the choice of illustrations less can be said. Some, such as those of the St. David's roof and east windows, are excellent, and the photographs of the carved and inscribed monumental stones form a creditable series. But many of the figures are bad in themselves or are wrongly included. Thus the frontispiece (Cilgerran Castle) is taken from the 18th century engraving after Richard Wilson, and many other illustrations are reproduced from ancient drawings and prints. Even where these are accurate (and they are sometimes patently inaccurate), they have no value as records of these monuments in the present year of grace, and the Commission both exceeds and falls short of its proper function in including them at the expense of more modern material. It has spent its time by candle-light in hunting up well-known engravings by Buck and less-known scribbles in venerable manuscripts, when it should have been tramping the hills with note-book and camera, or at best it has contented itself with pretty sketches instead of preparing architectural records of scientific value.

Other points in regard to the illustrations call for comment. A group of four Bronze-Age urns found near Narberth occupy no less than four expensive half-tone blocks, each urn being represented *three times* ! Yet another block (on fig. 5) is devoted to a small piece of bone (from one of the same urns) ribbed in a perfectly normal fashion by heat but alleged to show "peculiar markings." The same plate contains three blocks of urns found respectively in Glamorgan, Carmarthenshire, and Anglesey and having no connexion whatever with the county under discussion. The dolmen at Newport, well illustrated by a half-tone block as fig. 9, is again shewn in fig 216 by means of a sketch

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drawn from the same point of view specially for this volume ; whilst a dolmen at St. Nicholas is also twice illustrated (figs. 8 and 315). A flint chisel is of sufficient importance to appear both as fig. 4 and as fig 98a. Figures 100 (i) and (ii) are two separate views of Cilgerran Castle from the same aspect ; and the same side of the tower of Loveston church is photographed as fig. 76 and drawn as fig. 171. And so on. The excavation of Haverfordwest Priory, carried out in 1922, is referred to in the text but, instead of reproducing the published plan of these excavations (which are still open), the Commission's editor has used a preliminary plan prepared by the excavator prior to the digging. These instances merely indicate editorial incompetence, but the mention of plans draws attention to a far more serious deficiency.

From the outset, the Welsh Commission has failed completely to realize its responsibilities in regard to the numerous architectural monuments which come within its purview. Its descriptions of architectural remains have been either childishly inadequate or definitely misleading, and in no county has it prepared an architectural plan of any archaeological value. Pembrokeshire, with its castles and its ecclesiastical group at St. David's, provided an opportunity for repentance and reform. What use has the Commission made of this opportunity ? The famous castle of Pembroke itself is represented by a ridiculously inadequate outline-plan taken from a guide-book published by a newspaper, and " based upon the discoveries and conjectures " of a Mr Cobb who wrote an article on the castle in 1883. Carew Castle is represented by a small block-plan little more than an inch square and prepared in 1886. The list could be extended indefinitely. In the case of St. David's Cathedral a special effort has been made ; a period-plan (fig. 282) has been borrowed—and reduced to so small a scale that it is all but impossible to distinguish one period from another ! It need hardly be added that no attempt is made to plan the cathedral in relation to the medieval buildings which adjoin it.

In regard to the plans of earthworks and kindred structures the case is as bad or worse, and no detailed comment will here be made.

Let us turn now to the text. The total inadequacy of almost all the architectural descriptions has already been noted. The account of St. David's Cathedral has indeed been guided by the competent hand of Mr E. W. Lovegrove, but the very striking remains of the Bishop's Palace are not even deemed worthy of a separate entry, nor are the medieval close-wall and gateway even mentioned ! The Palace is indeed described in a summary fashion, but the description is that of Pennant, published in 1811 ! At St. Dogmael's Abbey, planned and described by Mr A. W. Clapham in 1921, the editor, while accepting Mr Clapham's plan, attaches it to a muddled description compiled by an amateur in 1859. Reference has already been made to the ridiculous treatment of the important castle-architecture of the county. Where the editor ventures to supplement the fourth-rate theories of amateur Victorian antiquaries by any observation of his own, we are served with statements such as this (of Roch Castle) : "*The chapel*, now used as a boudoir, retains its ribbed vaulting ; in the east wall is an opening which, *if the castle possessed a chapel*, may have been an aumbry" (*italics added*). The editor is so completely befogged that he cannot even steer his course through a semi-colon. Example follows example of incompetence throughout the book, and those noted here are chosen at random from a multitude. One more only may be cited in the present context. Throughout the Welsh Commission's reports ancient secular architecture has been grossly neglected. By grace in the present volume a few specimens of the very interesting Pembrokeshire cottage-architecture have been illustrated in line or half-tone—

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but they are not referred to in the Inventory ! On the other hand a " bronze pipkin " seen in 1864 at Haverfordwest and now lost is honoured with a separate entry.

From the Inventory we turn to the Introduction. Here the editor surveys the scene and with unnecessary pomp and circumstance emphasizes the ignorance which he attempts to conceal. We read : " It seems to be beyond dispute that some of the stone implements discovered in Pembrokeshire have been obtained from *pre-glacial* deposits, and must therefore be accepted as *genuine human products of the Palaeolithic Age, or of the twilight period of Azilian or Tardenoisian finds* " (*italics again added*). The only possible inference from such a statement is that its writer has not begun to understand the relationship of the glacial era with palaeolithic and mesolithic man ; unless it be the further inference that such a non-sequitur statement could only proceed from a mind incapable of logical reasoning. Under the Bronze Age we learn : " The Bronze Age saw the county occupied by what appears to have been a busy and flourishing population, which shared to a considerable extent in the culture of that age. The community constructed big camps, adapted as well for defence as defiance." This unequivocal statement in face of the fact that not a particle of evidence suggests any occupation of any Pembrokeshire camp in the Bronze Age ! If we turn back for a moment to the Inventory, we can easily see how little the editor understands the nature of Bronze-Age evidence. Thus, a late Romano-British cooking-pot (no. 690 A) is described as " of the cordon type, and probably dates from the later Bronze Age ;" a halberd (no. 802) is described as a dagger ; and a palstave (no. 116 A) is described as a flanged celt. Similar errors abound in previous volumes from the same incompetent hand.

Passing over a later reference in the introduction (p. xxxv), to Stonehenge, where it is clear that the editor has not appreciated the results of recent research, we come to a long and wordy discussion of the possible site of the battle of Mynydd Carn, fought in 1081, a topic quite outside the scope of the Commission. And this brings us to the final and fundamental question : What is the intended scope of the Commission's survey ?

The intended scope is pretty clear. It is laid down by Royal Warrant that the Commission shall " make an inventory of the Ancient and Historical Monuments and Constructions connected with or illustrative of the contemporary culture, civilization, and conditions of life of the people in Wales and Monmouthshire from the earliest times, and to specify those which seem most worthy of preservation."

In this function the Welsh Commission has failed, and failed catastrophically. Only the Roman material, which has passed through the skilled hands of Mr R. C. Bosanquet, can be regarded as consistently adequate. For the rest, we accuse the Welsh Commission of (1) lack of all technical appreciation of the architectural evidence which is the nucleus of their whole work ; (2) the consistent use of out-of-date, incomplete and inaccurate descriptions and illustrations of their material ; (3) a consistent ignorance of prehistoric and Roman material, with the exception of those Roman sites dealt with by Mr Bosanquet ; (4) a complete failure even to attempt to fulfil the terms of reference in respect of secular architecture ; (5) irrelevance in matter and treatment ; and (6) a general editorial incompetence which incidentally involves the waste of public money.

Indeed with all restraint it may be urged that the Commission as at present constituted is a laughing-stock amongst professed archaeologists and is financially an unjust charge upon the State.

O. E.

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THE PLACE-NAMES OF THE ISLE OF MAN. By J. J. KNEEN. Parts i-iii.
1925-6. The Manx Society : Douglas.

The Isle of Man has been fortunate in the enthusiasm of its sons for the antiquities of the Island. The late A. W. Moore did much for its place and personal names. Mr P. C. Kermodé has written a volume upon *Manx Crosses* of the highest scholarly and artistic value. To these names must now be added that of Mr J. J. Kneen, as the first exhaustive interpreter of its place-names. The Manx Society has now published the first three out of some six parts of his study on *The Place-names of the Isle of Man*. The time is not yet ripe for a full review of the work but an 'interim report' on the work should be of interest to the readers of ANTIQUITY. Following the usual line of place-name study nowadays Mr Kneen has diligently collected from the ancient *Chronicle of Man*, from early cartularies, from sixteenth century manor-rolls, from inscriptions, from registers and the like, all available early forms. For many of the names no really early forms are available; but here, by close and careful record of the local pronunciation of the names in question, Mr Kneen has been able to unravel many a difficult etymological problem. The linguistic problems arising from a Celtic basis, a Norse admixture, and an English domination are many, and names have become strangely transformed. The ancient Celtic saint St. *Ninian* is present, much disguised in St. *Trinian's* Church in Kirk Marown; the Manx *cashtal ny waaid*, 'hill of the sods' appears in 1511 as *Castel Newade* and now as *Castle Ward*. It takes its name from a hill partly natural and partly artificial, and part of the estate is still locally known as 'Sod Castle.' Names of Scandinavian origin undergo similar transformations. 'Old *Barrule*,' familiar to us from the poems of T. E. Brown, is from Old Norse *Vörðufjall*, 'ward-fell'; Orrisdale is from Old Norse *Hæringstaðr*, 'Høring's farm'; Skibrick is from *skiphryggr*, 'ship-ridge,' a hill which by its shape suggested a ship turned upside down; Gretch is from *Grettisstaðr*, a farm named after one *Grettir* bearing the same name as the famous Icelandic outlaw Grettir the Strong. Sometimes we have a curious mixture of Norse and Manx as in Ballaharry, earlier *Balhamer*, 'farm of the crag,' from the common Manx word for a farm and the Old Norse *hamarr*, 'crag.' Only rarely do we come across names of purely English origin and those of quite late date, as in White Hoe, 'white ridge or hill.'

Throughout his studies Mr Kneen has a keen eye for topography, for the legends and for the antiquities of the country-side. The Dhoon in Kirk Maughold (cf. Gaelic *duin*, 'fort') takes its name from the earthworks on Kionhenin; Slieau Ynnyd ny Cassyn in Kirk Christ Ruthen 'the mountain of the footprints,' takes its name from a rock which bears the impression of a club-foot, said to have been made by St. Patrick when he landed there from Ireland; and Oog ny Seyir, in the same parish, 'cave of the carpenters' was so called by the fishermen who said that fairy carpenters made furniture in the cave, and when they sailed past they could hear their hammering and see the chips being washed about by the tide. Mr Kneen's works is no dryas dust etymological study. It is a living record of the traditions and lore of the Isle of Man, caught just before it is too late; and to him we owe a debt of deepest gratitude. It is earnestly to be hoped that the enterprise of Mr Kneen and of the Manx Society may gain that full measure of support which it so richly deserves.

ALAN MAWER.

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OUR PREHISTORIC ANCESTORS. By DOROTHY DAVISON. London : Methuen. 1926. pp. 200, illustrated. 7s. 6d.

We are supplied here with an accurate and orderly summary of the evolution of Man from earliest times until the close of the Azilian-Tardenoisian period. The treatment is superficial, but none of the salient facts is omitted, and the work is certainly up to date, since accounts are furnished of the Galilee skull and that of the Lady of Lloyds. It is the author's hope that the book will prove of service to teachers, and, in point of fact, it has been primarily written with that object in view. To a large extent the hope will be fulfilled. But the reader cannot help being struck by the meagre part which British archaeology is allowed to play throughout the chapters. In a book designated for the education of English children this is a fundamental error, since British names, both personal and local, would find a more easy reception in a child's mind and would help to sustain the listener's attention and interest. It is not suggested that the material facts relating to the Continental discoveries recorded by Miss Davison should be omitted ; far from it. The information she has collected is indispensable for completing an outline of Man's physical and cultural progress ; nevertheless the value of her book would have been greatly enhanced were the English evidence described to better advantage. When a second edition is in contemplation, it may also be worth consideration whether there can be included a few pages on Pleistocene geology, explained in the author's lucid manner of instruction. Miss Davison forcibly demonstrates that in pursuing the study of archaeology there are occasions when the dullest of imaginations will be aroused and when the thrills of the adventurer may be shared. As an example, we find on page 140 the following graphic description. . . "After exploring splendid halls adorned with pillars and cascades of stalagmite of beautiful colours, they had to give up the search. They paid more visits later, however, exploring another passage, and at length, after being nearly asphyxiated, they succeeded in reaching an immense gallery 115 yards long and 12 yards wide. Here there were few stalagmites, but the walls were covered with engravings and paintings in black and red of mammoths, horses, and fish, and there were ten silhouettes of human hands, as well as numerous signs and dots. One flint graving tool was found, and a bear's tooth which had been carefully placed by a Cro-Magnon on a ledge of rock. On the floor were the animal's bones and the footprints of the men of long ago." The style of the author's writing is commendably clear and carries a freshness which makes the 200 pages seem all too few.

J. P. T. BURCHELL.

EVERYDAY LIFE IN THE OLD STONE AGE. By M. and C. H. B. QUENNEL. London : B. T. Batsford. 2nd edition, 1926. pp. 113, illustrated. 5s.

The writings of Mr and Mrs Quennell, whether upon historical or prehistoric matters, are now well known and they are appreciated by large numbers of people, both young and old. The volume under review is the result of the exhaustion of the first edition which appeared some five years ago, and the opportunity has been taken of making revisions and additions. The authors have not attempted to portray a detailed account of pre-Neolithic man in this country, nor was it their intention to produce a simplified text-book on the subject : they merely sought to provide an introduction to that study by methods and in language which would attract the interest of a child and satisfy its requirements. Mr and Mrs Quennell have succeeded. We congratulate them and also the children who are so fortunate as to make acquaintance with this very delightful book.

J. P. T. BURCHELL.

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EXCAVATIONS AT CHELM'S COMBE, CHEDDAR; conducted under the Excavations Committee of the Somerset Archaeological and Natural History Society, 1925-6. J. C. and A. T. Sawtell, Sherborne. 1927. 1s.

This is a report on a rock-shelter which was inhabited during Neolithic and later times. The archaeological finds included two round-bottomed Neolithic bowls which have been mended by Dr Clay, large portions of a (probably Neolithic) vase with finger-tip ornament, bone implements (also probably Neolithic), a bronze brooch of about 50 A.D. and many objects of lesser importance. Innumerable remains of animals of all kinds were also found and are ably identified and described by specialists. There was also a 'rock-tomb,' but we cannot find any description of it or account of its excavation. This omission is a serious one, especially as the burial is described by Mr Balch as being "unique among Mendip tombs." It is claimed from the evidence of the human bones to be Neolithic; portions of four individuals were represented. It seems therefore to have been a communal burial-place, the local, if diminutive, equivalent of a long barrow. (It was "only about a yard square and about the same in height").

So far as it goes the report is useful, and the work seems to have been well carried out. But a lack of co-ordination is evident. The specialists' reports are thrown together and it is really difficult to find out what exactly was done. The essentials are given, but one would have welcomed more descriptive matter. Mr Balch's preliminary remarks might well have been omitted.

THE MYSTERY OF WANSDYKE. By ALBANY F. MAJOR, O.B.E., F.S.A., and EDWARD J. BURROW, F.R.G.S. Edward J. Burrow and Co., Cheltenham and London. 1926. 25s.

Mr Burrow has accomplished a difficult task in producing this book, which he has edited and in part written. His collaborator died while the book was in its final stages, and he was obliged to complete it without Mr Major's help. Circumstances such as these handicap the reviewer, for he is loath to criticize unfavourably the work of one who, in the words of Mr Burrow, was "a keen archaeologist and a good friend."

By what standard shall the book be judged? It is the only book written entirely about Wansdyke. It should state clearly and succinctly the evidence (1) for the course followed; (2) for the age, and (3) for the purpose for which it was constructed. Now for the greater part of its course Wansdyke is so well preserved that there can be no uncertainty about it. The doubtful portions are those in Savernake Forest, the portion near Bath, and that between Maes Knoll and the Bristol Channel. To recover these missing fragments would need the utmost skill and experience, combined with a stern resolution not to allow oneself to be deceived by misleading appearances, such as are often presented by modern or medieval enclosure-banks. To judge from the descriptions given these qualities seem to us to have been lacking. The majority of the 'associated earthworks' are plainly of quite recent date, and in no way connected with Wansdyke; and we feel convinced that many of the indications of the dyke itself which have been accepted as reliable should have been ruthlessly rejected. It is very greatly to the credit of the authors that they enable us to form our own judgment, by reproducing, in a most sumptuous fashion, the portions of the 25-inch Ordnance Maps with all these banks inserted. These, at any rate, are records of facts; and though we believe them to be for the most part irrelevant, who shall say that they are not, or may not some day be, of

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value? But is it likely to enhance the credit of field-archaeology, if its devotees not only allow themselves to be misled but proclaim the fact so loudly?

One would have thought that the date of Wansdyke had been fixed once and for all by the excavations of General Pitt Rivers, who proved conclusively that the portion which he excavated was Roman or post-Roman. But Mr Major, who always hankered after a less simple explanation, believed that it was "a composite work, made up of sections belonging to different periods and varying in size and construction" (p. 135). For this belief there is no evidence whatsoever; the alleged structural differences are mainly imaginary, nor, if they existed, would not necessarily prove a difference of age—they might well be due to geological factors. Mr Major's reasoning always puzzled us. When searching on the ground for traces of Wansdyke where it has disappeared, he would select one from the innumerable lesser banks which are to be found in almost every field, and call it Wansdyke; to most people the very fact that such a bank was of insignificant proportions would suggest that it was not Wansdyke. But Mr Major, having pronounced his verdict, proceeded to draw conclusions from his own opinion as if that opinion were a universally accepted and proven fact! Because some bits of "Wansdyke" are of much slighter dimensions than others, therefore they 'belong to a different period'! Such reasoning as this invalidates the whole book; we cannot trust any of the writer's interpretations.

For the same reason we agree with Mr Burrow in rejecting Mr Major's suggestion of a southern branch of Wansdyke between Bedwyn and Ludgershall. We had the advantage of going over this part of the ground with Mr Major himself, together with some other archaeologists, at the time of the last revision of Wiltshire by the Ordnance Survey. Our opinion, which was shared by the other members of the party, was that Mr Major failed entirely to make out a case. The banks claimed to be Wansdyke are of different ages—one is probably a medieval enclosure-bank, another on Wilton Down is certainly connected with some Celtic fields; these alleged portions are separated by gaps where no traces are to be found.

Mr Burrow claims that Mr Major's "life's work is largely summed up by the records now finally recorded in this book." The claim is hardly correct. Mr Major himself states (p. 106) that he did not begin to examine Wansdyke until 1913. He had already to his credit a book on the "Ancient Wars of Wessex" and other writings mainly dealing with allied matters, not to mention his valuable work as Secretary of the Earthworks Committee of the Archaeological Congress. Our own examination of Wansdyke began some years before Mr Major's, and we had walked along practically the whole length of it, and discovered most of the recoverable missing fragments, before Mr Major came on the field. These results were not published, but were placed at Mr Major's disposal; and were incorporated in the new edition of the large-scale Ordnance Maps when the opportunity occurred. We may therefore claim some familiarity with the subject. Perhaps, therefore, a short resumé may be pardoned.

The course of Wansdyke is fairly certain between Inkpen in Berks and Morgan's Hill in Wilts. There is, however, a large gap in Savernake Forest where no certain traces have been found. The most easterly portion that can be identified with certainty is Old Dyke Lane: (that this was really part of Wansdyke is proved by a survival of the actual name in an 18th century terrier of Inkpen parish, in the possession of the Rector). By far the best-preserved portion is that on the southern part of the Marlborough Downs. From Morgan's Hill to Kingsdown above Bathford, Wansdyke follows the course of the Roman road, which was used in constructing it. There is a

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gap between here and Odd Down ; but thence to Maes Knoll it can be traced almost continuously. Beyond this we are dependent upon Mr Major's identifications. The age is either Roman or (more probably) slightly post-Roman. The purpose is unknown ; but it may have been intended to form a barrier against the Saxon invaders. In later times it was called " Wodnesdic "—Woden's Ditch—evidence that from early in Saxon times it was regarded with awe and its purpose probably forgotten. (It may be remarked in passing that the earthwork called on the Ordnance Map " Woden's Ditch " near Netherton in N.W. Hampshire, is a modern figment and has no resemblance to, or connexion with, Wansdyke ; it is called " Grimes ditch " in some medieval Forest Perambulations).

What was required was a concise account of its course, of the earlier references to it in pre-Conquest charters, and of General Pitt Rivers' excavations. The dense undergrowth of conjecture should have been ruthlessly cleared ; the descriptions of earlier writers are of value only in so far as they throw light on fragments which have now vanished. Such a work has yet to be written.

THE ROLLRIGHT STONES AND THE MEN WHO ERECTED THEM. By T. H. RAVENHILL, M.B., B.CH. Sold for the benefit of parish activities in Little Rollright ; price 1s. 6d. (Printed by the Birmingham Press Ltd., Hill St., Birmingham).

Compared with many others of its kind this is an excellent little book. So long as the author is describing Rollright he is on firm ground ; it is only when he attempts to tell us something about " the Men who erected them " that he gets out of his depth. With this warning we warmly commend the book to readers and visitors.

The Rollright Stones have attracted more attention than they deserve. The references to them before the 19th century are more frequent than references to Avebury. Perhaps this is because they lay near the crossing of two much frequented thoroughfares, and were not, like Avebury, encumbered by a village. The enclosures by which Rollright is now surrounded are modern ; in Stukeley's time (1720) the spot was a barren upland heath, and even to-day bleakness and solitude seem to linger there. Few spots are so grimly pleasing as the Rollright ridge. For the prehistorian these Oxfordshire heights have all the allurements of undiscovered country.

We venture, in a friendly spirit, to make some suggestions for the next edition. The general remarks on pages 20 to 35 need rewriting. Rice Holmes is the best guide (*Ancient Britain*, Oxford, 1907) ; and some of those mentioned in the " list of authorities " do not speak with authority. Rice Holmes deals faithfully with the astronomical theories of Sir Norman Lockyer. Indeed, in a book like the present one, the speculations of the unlearned—and Sir Norman was unlearned in archaeology—should be rigorously excluded. The " prospector " theories quoted on page 24 were never taken seriously by students and are now discredited. The drawings of flint arrowheads and other objects, between pages 42 and 43, are not very good, and it is a pity to include objects from so far away as Dorset. There are plenty of barbed-and-tanged arrowheads in the Royce collection, and there is a socketed bronze axe (from Slaughter) in the Gloucester Museum. If a drawing of a beaker is required, there are several Oxfordshire examples in the Ashmolean. Some economy could also be effected in the spacing of the illustrations, and the vacant space freed could be utilized for reproductions from the

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Gough Manuscripts or from Stukeley. The cover is in excellent taste, and a delight to those who appreciate good printing; but nowhere can we find precise information about how to get the book! Presumably it may be had direct from Mr Ravenhill at Little Rollright, but explicit directions should be given.

We wish Mr Ravenhill would go on and produce handbooks on similar lines for other districts. A good description has yet to be written of Stanton Harcourt and of the Swell district.

ANCIENT MONUMENTS OF NORTHERN IRELAND. H.M. Stationery Office, 15 Donegall Square West, Belfast; 1926. 24 pages. 6d.

The Government of Northern Ireland has set a good example by publishing this excellent, if rather slight, illustrated handbook. There are some twenty-two ancient monuments 'in the public charge.' Five admirably reproduced illustrations (four of them from Mr R. Welch's photographs) add to the attractive appearance of the pamphlet. In the next edition some plans should be added—one of the Giant's Ring, for example, would have been welcome—and a small index-map to show the position of the monuments. One thing puzzles us: although these monuments are said to be, 'in the public charge,' there is no reference to any official protector. Surely the Government must have appointed an Inspector of Ancient Monuments?

TWO GLASTONBURY LEGENDS. By J. ARMITAGE ROBINSON (DEAN OF WELLS). Cambridge University Press. 8vo, pp. xii, 68. Illustrated. 2s. 6d. net.

Underlying a legend, search will generally reveal a substratum of fact: various reasons may arise for its adorned presentation, and at once a dull and prosaic happening becomes clothed with an almost unrecognizable dress, the beauty and local colour of which tends to draw the attention entirely away from the bare bones it covers.

Glastonbury, the home of British Christianity, would naturally be expected to lend itself to the growth of legend: the mere sacredness of the spot would attract and absorb legends as they floated round. And the first coming of the Gospel to these shores would lend itself to the growth of legends which would tend naturally to fix themselves to Glastonbury.

Amongst others, two stand prominently forth, viz. that it was St. Joseph of Arimathea who brought the Gospel to England; and that King Arthur for the healing of his wounds was brought to Glastonbury, and at his death was buried within its hallowed precincts.

It is in all cases difficult, impossible in most, to say where history ends and legend begins. Only a patient study of the whole of the evidence can justify an authoritative statement. The Dean of Wells addresses himself to these two legends with scholarly accuracy; he marshalls his historical facts and makes them reveal a date before which at any rate there is no trace of these legends in connection with Glastonbury.

How they became attached to the history of the Abbey, or why, we can only guess. The fact which the writer establishes rests upon the silence of William of Malmesbury, the historian of Glastonbury. When he visited the Abbey in the early years of the 12th century at the invitation of the monks it was with the intention of acquiring from them information which would enable him to write the past history of this monastery.

It cannot be supposed that matters of such fundamental importance to the Abbey

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as the story of St. Joseph of Arimathea (to say nothing of King Arthur) would have been kept from him by the monks if they were at that time a part of the tradition of the place. On both legends William of Malmesbury is silent ; he wrote in 1125.

The earliest date that can be assigned to either of the legends is 1191 ; that was after the great fire when every energy was being expended in the rebuilding.

But it would be unfair to take these, the conclusions of the main theme of the book, apart from the introductory note in which the writer reveals himself a keen and devoted lover of legendary lore. The conclusions reached by his historical researches in this and other fields of a similar kind are meant to convey to his readers what they apparently do to him, a veneration for tradition and an understanding of the stages by which fact gradually assumes local colour and emerges ultimately in full dress.

There are seven additional notes at the end of the book, all of them of great interest. It is a happy thought that has induced the Dean to place where they can be so easily reached the results of what must have been long and patient study.

The " *Old Church* " at Glastonbury, no. 11 of the seven, will be constantly consulted by those who in the future have to work upon the Abbey site. It corrects a curious error which has crept into Professor Willis' *Architectural History of Glastonbury* (1866).

Note v treats of the *Two cruets of St. Joseph of Arimathea*. Father Horne in *Somerset and Dorset Notes and Queries* (xviii, 254) has already added four more to the list of known occurrences of these heraldically represented. Quite possibly there are more ; an exhaustive list would be useful and interesting.

T. F. PALMER.

THE AMARNA AGE. By REV. JAMES BAIKIE, F.R.A.S. London : A. and C. Black. 1926. pp. 458, with 32 plates and 5 maps. 12s. 6d.

There are books that can be read in an armchair with one's feet on the mantelpiece, and others that have to be read in a stiff-backed chair with a cold water bandage round one's head. Those written in a narrative style, setting forth conclusions drawn from former reports, belong to the first category, provided that the author has command of his words ; while first accounts of new discoveries, which, to be successful, must needs be in the form of a connected catalogue, naturally come under the second. The " *Amarna Age* " however can safely be read in an armchair without any fear of falling asleep. The author has literary power and the gift of apt metaphor.

In 1887 more than 300 tablets in cuneiform character were discovered at Amarna. They consist of letters and dispatches to the kings of Egypt from the kings and governors of the neighbouring Asiatic countries. They disclose much valuable information concerning Babylon, the Hittites, Assyria, Mitanni, Cyprus and the Amorites ; and their discovery is probably the most important that has ever been made in Egypt. On the events and the life of the time during the xviiith Dynasty they throw much light. It is of this period that the book treats—" the crisis of the ancient world " as the author terms it.

Thotmes III, the Napoleon of Egypt, was instrumental in establishing his country as the leading military power. He was followed by Amenhotep II, famous for his splendid buildings and artistic achievements. With him " culminated the material glories of the new empire." After the reign of Amenhotep III the decline begins. There was a great admixture of foreign blood during the xviiith Dynasty, and the race gradually became less pure and art lost some of its ancient traditions. Amenhotep IV, " the world's first pacifist," altered his name to Akhenaten when he changed the

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national religion from Amenism to sun-god worship and the recognition of a universal deity. Such an idealist was no match for the restless schemers across the frontiers. His successor Tutankhamen reverted to Amenism under pressure from the priests. Horemheb, the last of the Dynasty, was a conscientious ruler who re-established law and order.

Not the least important chapters in the book are those devoted to descriptions of the rival nations: the Minoans and their tragic collapse; the Hittites, whose heyday lasted but for two or three centuries; the Mitanni; the Babylonians, who gave the world "the first fruits of knowledge and culture"; the Assyrians, valiant in arms. "The lands were all linked with one another by a network of perfectly well-defined trade routes," and "international relationships were just as real and active as they are to-day, though perhaps somewhat slower in their methods of communication."

R. C. C. CLAY.

ANCIENT PERSIA AND IRANIAN CIVILIZATION. By CLEMENT HUART.
London Kegan Paul. 1927. pp. 223 with 4 plates, 35 illustrations, and map.
12s. 6d.

This is, as Henri Berr says in his foreword, a "work of synthesis." The author, Clement Huart, has succeeded in the difficult task of giving in a concise and readable form a veritable encyclopaedia of Persian history. The trees do not obscure the wood; and in spite of the mass of detail and the profusion of names anyone interested in the history of the East can read this book with both pleasure and profit.

Chapter I gives an excellent account of the physical configuration of Persia, but the absence of a really good map is regrettable. A short and lucid chapter on the Persian scripts follows.

The unification of the Medes into a single nation by Deioces was facilitated by a period of good relationship with the Assyrians. His successor Phraortes, a more aggressive man, suffered a disastrous defeat. Cyaxares remodelled the army and carried war into Assyria, but was robbed of the fruits of victory by the invasion of his own country by the Scythians, who were routed only after a hard and none too sportsmanlike campaign. Allied with the Babylonians, the Medes defeated the Assyrians and sacked Nineveh. Soon however they were to fall to the military genius of Cyrus, king of the Persians, and to be incorporated with his immense empire "which took an Alexander to overthrow two and a half centuries later." The success of this empire was due in no small part to its statesmanlike toleration of subject peoples. Cambyes, the son of Cyrus, conquered Egypt and turned his attention to Carthage. The Phoenicians refusing him the help of their fleet, he sent an army across the Sahara but it was destroyed in a sand-storm. An expedition against Nubia also failed. Cambyes returned home after an orgy of brutality at Memphis, only to find his kingdom in revolt. Failing to suppress the rebels, he died—probably by his own hand. Darius, after subduing insurrections in all parts of the empire, set up an efficient system of satrapies and built and maintained great military roads. He attacked Thrace and southern Russia. In 490 the Persians suffered a crushing blow at Marathon. Later on Xerxes captured Athens, but after the battle of Plataea the Persians retreated. A period of internal strife under a line of weak kings led up to the disintegration of the empire following Alexander's triumphal campaigns. The great Achaemenian empire flourished by reason of its efficient organization and the ruthlessness which was meted out to those who disobeyed its despotic rulers.

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"Persian art was a composite art born of the royal fancy, which had gathered into an artificial, powerful unity, like the empire itself, every artistic form which struck it in the provinces of Assyria, Egypt and Ancient Greece. It was the caprice of an omnipotent dilettante with a love of size."

Persia came under Hellenic influence during the period of the Parthian Arsacids. The special feature of the "government of the Sassanids as compared with that of their immediate predecessors, the Arsacids, was the centralization of the powers of the state in the hands of an absolute monarch, supported by an exclusive religion."

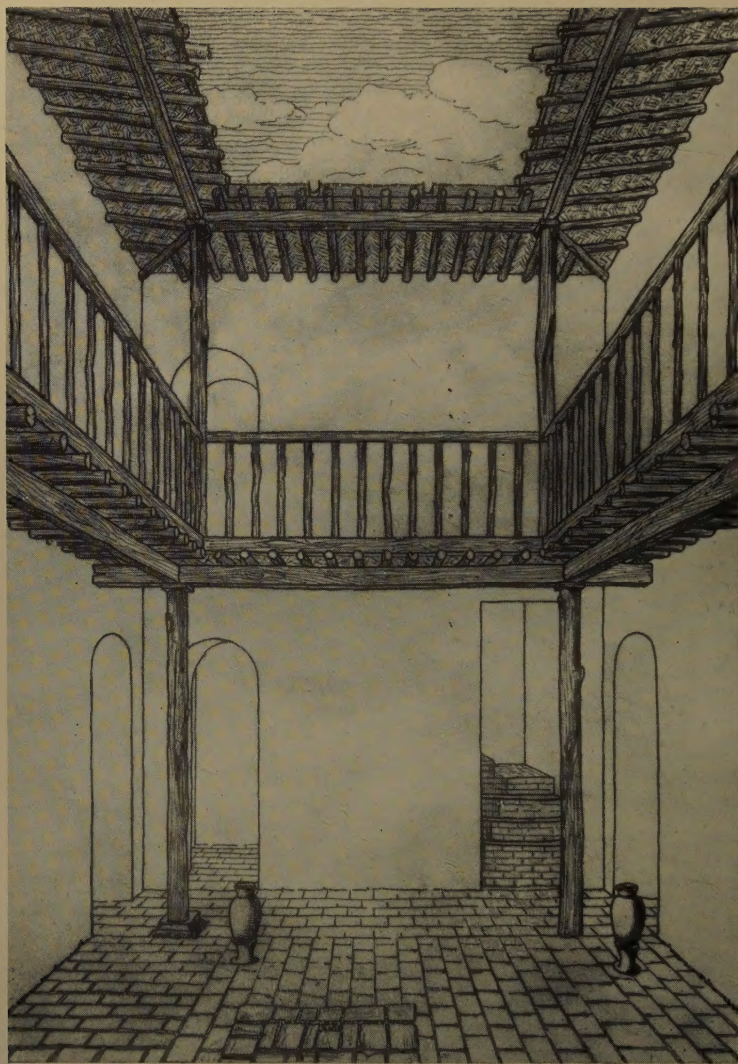
R. C. C. CLAY.

AGRICOLA'S ROAD INTO SCOTLAND: THE GREAT ROMAN ROAD FROM YORK TO THE TWEED. By JESSIE MOTHERSOLE, with illustrations in colour and black and white by the Author. London: John Lane, 1927. 10s. 6d.

Readers of Miss Mothersole's "Roman Wall and Saxon Shore" will welcome her new book. Her title brings out the unity and historic significance of a road known locally by a variety of names: Leeming lane in Yorkshire; Dere street across the old bishopric of Durham and far beyond the Border; Watling street in recent books but never in the mouth of the people; High street and Gamelspath for short stretches. She follows this trunk-road for 140 miles, sketching Roman ruins and their setting, noting scenery and small adventures by the way, making friends with country people and enjoying rough quarters. But it is much more than a book of pictures and travel-talk. It sums up for the first time what is known about the road and twelve Roman sites that lie beside it, giving a sketch-map of each and extracts from old writers who saw more than exists to-day. When there has been exploration, on six of these sites, plans and drawings are reproduced and the excavators' conclusions are summarized with excellent judgment.

Traces of Agricola's army were found at Corbridge on Tyne, Cappuch, and Newstead on Tweed; the pre-scientific work at High Rochester (1855) and Binchester (1880) threw no light on the earliest occupation, while that at Risingham (before 1840) was demolition rather than excavation. From the legionary base at York the road went first to Aldborough, a tribal capital which was to York as Caerwent to Caerleon, a walled town of 60 acres with mosaic floors and other signs of civil life. Thereafter we have a chain of military posts, mostly at river-crossings; six or seven leave some record of a Roman bridge; we can judge of them from remains of the bridge across the Tyne, 154 yards long with ten water-piers. Excavation is needed to ascertain whether Catterick, Piercebridge, and other forts on the southern half of the road retained their garrisons permanently. At Binchester part of a substantial civil settlement has been uncovered outside the fort, and Corbridge grew into a town as well as a military base behind the shelter of the Great Wall. Farther north the remains are purely military and—as the landscape grows wilder and tillage is left behind—astonishingly well preserved. For 35 miles across the Northumberland moors and through the Cheviots we come again and again on abiding footprints of Rome, the lines of temporary camps thrown up by troops on the march still clearly defined in the grass or heather. Once clear of the pass, Dere street descends into Teviotdale and runs straight as a dart for the Eildon Hills. Beneath that triple-peak lies Newstead, Ptolemy's *Trimontium*. Miss Mothersole ends her volume with an admirable chapter on Mr Curle's excavations in this, the largest military station north of York, and a colour-drawing of Sir Walter Scott's favourite view of Tweed and the Eildons from Bemersyde Hill.

R. C. BOSANQUET.



A PRIVATE HOUSE AT UR OF THE CHALDEES, ABOUT THE TIME OF ABRAHAM

From a drawing by A. S. Whitburn, A.R.I.B.A.